The Iron

A Review of the Hardware, Iron and Metal Trades.

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Cold-Punched and Hot-Pressed Nats.

Prof. R. H. Thurston, of the Stevens Institute of Technology, has lately made an interesting and important series of experiments to determine the resistance to stripping and bursting strains of cold-punched nuts respectively, however, and hot-pressed nuts of different sizes. He reports the results defiere neither and pold-punched nuts possessed a maching greater average strength, combined with greater arigidity and slightly greater uniformity, than were exhibited by the hot-pressed nuts, and that the superiority was most strongly manifested in the trials strength never attained by the hot-pressed nuts of not pressed nuts of the trials greater are uniformity, than were exhibited a strength never attained by the hot-pressed and cold-punched nuts expectively, was ob-

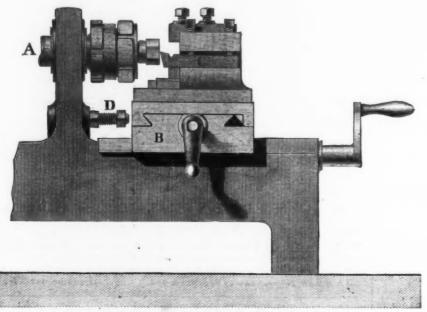


Fig. 1-Elevation of Machine for Finishing Nuts

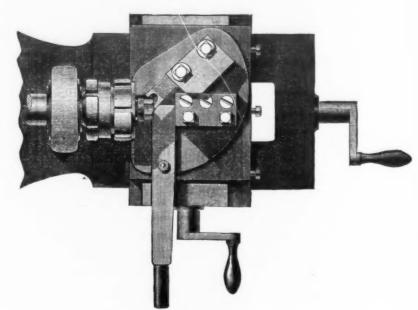


Fig. 2.—Plan of Machine for Finishing Nuts.

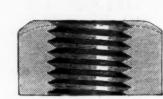


Fig. 4.-Cold-Punched Nut.

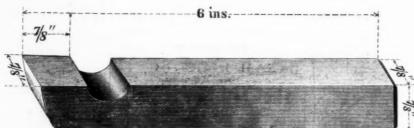


Fig. 3.—Tool for Finishing Bottoms of Nuts.



Fig. 5 .- Hot-Pressed Nut



Fig. 6 .- Tool for Chamfering Nuts.

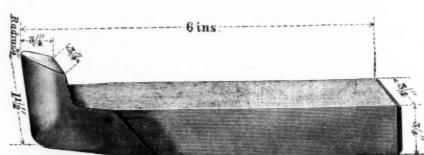


Fig. 7 .- Tool for Planing Sides of Nuts.

MACHINERY AND TOOLS USED IN TESTING COLD-PUNCHED AND HOT-PRESSED NUTS.

the relative amount of injury done to a tap in tapping equal numbers of each kind of nuts, and the relative amounts of wear of cutting tools attendant upon the finishing of the bottom, top and sides of each kind of

The nuts were in the condition in which they left the punching machine. They were %-inch hexagonal nuts of the following di-

* Some of these nuts were 3-64 inch shorter.

nuts, but that such variations in the strength of both styles occurred as to have caused the hot-pressed nuts to equal, and occasionally to excel, in strength the weakest specimens of cold-punched nuts.

As the results of the bursting tests were convenienced on the convenience of the properly shaped tool before the latter because of the properly shaped tool before the relative wear upon the cut-

purely comparative, Prof. Thursand plemented this statement of the results of tests of strength of nuts with a report on the cost, as determined by experiment of finishing the two styles of nuts. The accuracy of the statements of this report and the acknowledged ability of its author, justify us in presenting it to our readers at some length.

The manufacture by Sharp, Stevant Las Iron Works, Manchester, England. It consists of a spindle A (Figs. I and 2), carrying at one end a screw mandrel and mounted parallel to a pair of ways, upon which moved a slide-rest, B, carrying the facing tool C. The spindle being set in motion and a nut placed upon the mandrel with tion and a nut placed upon the mandrel with the bottom presented to the tool, the latter was fed by hand against the nut until the slide-rest met a stop D, which was adjusted to the thickness to which it was desired to face the nut. The spindle rotated at the rate of 70 turns per minute, and the feed-stop was adjusted so that one-sixteenth of an inch of thickness was removed from each

> In facing the cold-punched nuts a single In facing the cold-punched nuts a single tool was used to take off the one-sixteenth inch of thickness; but in facing the hot-pressed nuts it was thought desirable, in consequence of the injury which a tool suffered from the scale forming the external

ative wear upon the cutting tool, in facing the bottoms of hot-pressed and cold-punched nuts, one tool being used for roughing and another for finishing, is as 117 to 44, or 2.66 adjusted to the width to which it was desired to I, and that the average time consumed in facing one nut is 117 seconds

* Although the cutting-edge of the tool was % inch, the tool was held in the slide-rest, so that only a portion, 7-16 inch, was dulled. Therefore it would probably be possible in actual work to face nearly twice as many nuts per grinding if the tool were shifted so as to utilize the entire edge,

Therefore the relative wear upon the cutting tool in facing the bottoms of hot-pressed and cold-punched nuts respectively, the same tool being used for both roughing and finishing, is as 117 to 17, or 6.88 to 1. The time required was equal, as far as the observations went, being 90 seconds.

The second method of comparing the wear in finishing the bottoms and tops. The machine used for neach side of the machine upon a vertical mandrel fixed in the sliding table, which was automatically fed horizontally, back-mend of the property of the sides of the same firm as the machine used in planing the sides consisted of a double vertical planer, made by the same firm as the machine used in planing the sides consisted of a double vertical planer, made to the same firm as the machine used for nearly statement of the same firm as the machine used for nearly statement of the same firm as the machine used for the bottoms and tops. The machine used in planing the sides consisted of a double vertical planer, made by the same firm as the machine used for the bottoms and tops. The machine used for the bottoms and tops. The second method of comparing the wear in finishing the bottom showed that the relative wear upon the cutting tool, in facing the bottoms of hot-pressed and cold-punched nuts, one tool being used for roughly and the cross-head of the plane. sides of the nuts were planed in three strokes

		eing oms.	Chan		Plan Sid	
Style of Nut.	Time of cut-	No. of grind- ings of tool.	Time of cut-	No. of grind- ings of tool.	Time of cut-	No. of grind- ings of tool.
	н. м		п. ж.		н. м.	
Cold-punched Hot-pressed (first	25 00	9	23 25	7	74 10	17
method) Hot-pressed (sec-	25 O	59	23 45	56	74 10	174
ond method)	32 30	23	32 58	12		

000,000 to wipe out debts. The railroad companies give their bonds for this \$150,-The planer was run at 96 down strokes ooo, ooo to be repaid in fifteen years, at the per minute, and the table was fed 34 inch rate of \$10,000,000. Metals.

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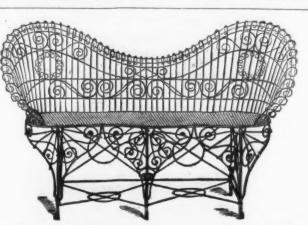
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Cinder in the Blast Furnace.

by J. Wolters, an eminent Belgian engineer, 1860 we take the following on the use of cinder also in blast furnaces, published in the Revue the

to slag. Cinder not only corrodes the walls of the hearth, but often affects the quality of the pig. The bad effect which mill cinder has upon the quality of the vicinity of the pig. has upon the quality of the pig is the result of large quantities of phosphorus and silica which it carries into the metal. Those siliwhich it carries into the metal. Those sincates which descend into the hearth without having undergone a transformation in the upper regions of the furnace, are partially reduced in the hotter parts by the fuel and by the iron itself. By the action of a high temperature silica is reduced in presence of iron and carbon, and the silicon liberated combines with the iron, forming silicides, which are dissolved in the pig. If the cinder were in a finely divided state it would, perhaps, be easily reduced in the upper parts of the furnace, because if it is exposed for some time in a crucible lined with brasque to a heat below dull red, a button of iron low in silicon is obtained. It is only by a very high temperature that silica is reduced in presence of iron and carbon and the iron charged with silicon. When, however, the cinder is used in its ordinary state, or even after having been granulated, it is still too compact to be entirely reduced in the upper compact to be clurrely reduced in the upper regions of the blast furnace. A part reaches the hotter portions without having under-gone any notable changes, is soon afterward melted and goes directly into the hearth, where it decarbonizes the iron and alters its quality. The fracture of pig obtained with a charge having a large percentage of cinder is granular and dull in color.

As the proportion of cinder in the charge grows larger the slag made becomes darker and is charged with increasing quantities of iron. Truran assures us that in Wales the average percentage of metallic iron in the average percentage of metallic iron in the slag, when running on white pig, is equal to half the iron coming from the cinder.

Messrs. Gruner and Lan also prove by an example from the Dowlais furnaces that the amount of iron lost increases approximately in the proportion of the addition of cinder to the burden. A refractory argillaceous ore is the best addition in treating cinder.

The nature of the slag and its amount per

The nature of the slag and its amount per ton of pig produced exert a preponderating influence upon the quantity of cinder which the charge will bear. When the burden is very calcareous, and especially when the amount of limestone per ton of pig is great, 30 per cent. of cinder may be charged without inconvenience and without losing a large quantity of iron in the slag. Under the conquantity of iron in the slag. Under the conditions indicated the successful displacement of a greater part of the oxide of iron of the cinder by lime is arrived at before reduction, and, as it were, the conditions of having to reduce non-silicated ore are brought about. Nevertheless the pig will always hold, besides phosphorus, a considerable proportion of silicon, a fact which the great amount of silica in the charge explains.

M. E-calle, in the Bulletin de la Société de l'industrie minérale, recommends the treatment of cinder in a furnace constructed for charging at the circumference, provided of a greater part of the oxide of iron of the

charging at the circumference, provided with central gas flue and without a hearth, strictly speaking, or, what amounts to the same thing, a great distance between the tuyeres (about 5.3 feet). He cites the extuyeres (about 5.3 feet). He cites the example of a Givors blast furnace, belonging to Messrs. Larochette & Co., the burden of which is composed of 68 to 70 per cent. of calcareous and argillaceous ore and 30 to 32 per cent. of cinder. The slag made contained: Silica, 37 to 39; lime, 42 to 49; alumina, 20 to 18, and oxide of iron, 0.5 to 1.5 per cent. The pig, though it held 3.5 per cent. of silicon, worked easily in the puddling furnace and made fibrous iron. We cannot understand how a charge holding from 30 to 32 per cent. of cinder can produce from 30 to 32 per cent. of cinder can produce such iron. Besides holding a large quantity of silicon, which M. Escalle himself admits it to contain, this pig must be pretty high in phosphorus, a circumstance which absolutely prevents the production of fibrous iron. We can only explain its production to a certain extent by the fact that only reheating cinder could have been used, as that contains much less phosphorus than puddling cinder.

In Belgium some works have used as much as 45 to 50 per cent. of cinder. The product was highly charged with silicon and was only used for the manufacture of rails. With a highly calcareous burden and a strong proportion of cinder, it is possible to treat pretty large amounts of cinder without too great a loss of iron in the slag. Several methods have been proposed for the improvement of the products. We shall rapidly review them.

With the aim of facilitating the displacement of the oxide of iron by lime before reduction, and of thus making less silicious duction, and of thus making less silicious pig, efforts have been made to increase the number of points of contact between the lime and the cinder, by charging them into the furnace in the shape of briquettes composed of ground cinder, lime and slag.

According to Valérius this process has been used for years in Staffordshire with a light world for the clay is replaced by:

slight modification (the clay is replaced by coal dust). There these briquettes are em-ployed alone for the manufacture of Bessemer pig. It seems that the product is of good quality, but it should be understood that the cinder in question is obtained from pig and iron for steel purposes, and that for the better quality of steel only reheating cinder is used. According to M. Styffe, quoted by Valérius, this process was adopted several years ago by the Missling Furnace, in

Styria.

Another method of facilitating the treat ment of cinder and the improvement of the quality of the pig has been much extolled by Messrs. Minary and Soudry. The cinder is ground after having been immersed in hot water, mixed with bituminous coal in the proportion of 40 cinder and 60 coal and introduced into coking ovens. It is well known that if the temperature is not too high the cinders are reduced by carbon and yield iron or pig absolutely free from silicon. According to the inventors this "cinder coke" is free ment of cinder and the improvement of the

Cinder in the Blast Furnace.

From a very able paper on the means of acreasing the production of blast furnaces, y J. Wolters, an eminent Belgian engineer, take the following on the use of cinder.

It is evident, as M. De Vathaire has the following on the use of cinder. we take the following on the use of cinder in blast furnaces, published in the Revue Universelle des Mines:

The treatment of mill cinder in the blast furnace presents certain difficulties. It melts easily, descends into the hearth before it is entirely reduced, and causes a tendency to slag. Cinder not only corrodes the walls cannot improve the quality of the pig.

The last method used is slow calcination

The last method used is slow calcination of the cinder, an operation which transforms the greater part into a mixture of silica and peroxide of iron. The success of the operation depends upon the regularity and slowness with which it is conducted. It is probable that the sulphur is almost entirely eliminated in the form of sulphurous acid. Valérius describes the working of this operation as it is practiced at Seraing. The calcination lasts at least two months, after which time the cinder will serve for charge which time the cinder will serve for charging the furnace—30 to 40 per cent. of it being regularly introduced into the charge. The slag though deep in color does not contain more than 1 to 1.5 per cent. of pretoxide of iron. With 50 per cent. of cinder a blast furnace at Seraing got out of order quickly. It need hardly be mentioned that the calcination of the cinder, like the pre-ceding process, only facilitates its treatment without improving the quality of the pig.

Although the use of cinder is often a source of cooling, it has permitted a considerable increase in the yield of blast furnaces. Until now, however, no process has been discovered which permits the use of cinder in the manufacture of the higher grades of pig. The utmost that can be done under pig. The utmost that can be done under such circumstances is the employment of a certain quantity of reheating cinder, which it is true contains a larger quantity of silica, but, on the other hand, holds a good deal smaller amount of phosphoric acid than puddle cinder.

Analyses of Illinois Coals.

The following approximate analyses of Illi-nois coals, made by Wm. D. Rudy, possess an interest as well because they show the com-position of a number of Illinois coals, as be-cause they exhibit the effect of coking upon the removal of sulphur. The color of the ash of the coals varies from nearly white to dark gray, the prevailing color being light

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Designation.	Water.	Ash.	Volatile con bustible ma ter.	Fixed carbon	In coal.	In coke.	Forming p. ct. of coke.	Cubic feet fix gas per lb. coal.	Quality of Coke.
Bloomington, McLean County Coal Co	7.90	4.96	34.03	53.12	1.97		30	2.40	Cellular, swollen.
Barclay, Sangamon county	10.8a	17.10		44.78	3.21	1.37	2 21	2.17	.17 " unung.
Carbondale, Jackson county	6.36	7.40		59.84	.80		0.71	2.30	**
.0	7.80	12.70		48.42	3.46		0.99	2.01	Compact.
DuOnoin Perry County	9.00	14.04		44.56	2.72	.43	0.72	2.40	
	7.60	0.50	27.60		2	.99	4 4	1.93	Cellular burning.
Farmington, Fulton county	8.52	X1.72		50.48	3.28	00	8.35	2.17	Dry burning.
Crape Creek, Verminon county		10.60		SI	3.63	.97	1.57	1.79	Compact.
Lincoln Torsan County	15.00	7.14			2.22	.004	1.47	2.30	Dry burning.
Lombardville Stark county		14.84			4.99	2.43	3 95	1.47	C-11-11-11-11-11-11-11-11-11-11-11-11-11
Mt. Carbon, Jackson county	6.12	2.70	24.68	66.50	.60	.71	2.19	2 77	Dry hurning
LaSalle county,	12.12	7.73	30.84	49.32	2.02	. 68	1.19	1.08	Cellular.
Oglesby, Labane county, 3d vein	10.06	3.72	30.34	55.88	3.27	1.42	2.38	2.24	" swollen.
Vonehoishang Coal Prof Wahar's analysis	10.30	4.54	33	51.26	3.05	.00	1.48	2.33	44
agnogueny coat, rrot, wer	.90	3.35	28.90	66.85	.98	.66	0.81	3.36	
t te confi		-	2				-		

The following complete ultimate analyses were also made by Mr. Rudy, who has besides, based upon the results obtained, calculated the heating power given in the third

ULTIMATE COMPOSITION

Carbon	68.36	72.98	69.52	65,40	81.27
Hydrogen	5-94	5-39	5-42	5-14	4.66
Nitrogen Sulphur	1.59	0.60	0.80	1.52	0.08
Oxygen		16.65	15.31	19.06	7.08
Ash	4.90	3.70	7.40	7.00	3-35
Total	100.00	100,00	100.00	100,00	100.00

Bloomington, McLean County Coal Co. Mt. Carbon, "Big Muddy" Coal, G. T. M. M. &

o. Carbondale, Carbondale Coal & Coke Co. DuQuoin, Enterprise Coal Co. Youghoigheny Coal, Prof. Weber's analysis. HEATING POWER.

			X X	9
Bloomington			6,575	81.36
Mt. Carbon			6,790	84.03
Carbondale				8x.47
DuQuoin				74.61
Youghoigher	лу		7,959	98.50
Pure charcos			8,060	100.00
 Calorific ter raised in of fuel. Calorific 	temperat	ture 1 deg		pound

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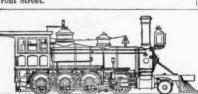
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produced contains paying quantities of silver, and a large amount of this metal is extracted from silver ores through the agency of lead products, added in smelting, as a collect-ing medium. The desilverization of argentiferous lead, or base bullion, as it is called, is therefore one of the most important of metallurgical problems. Until the year 1829, when Pattinson invented his process, no other means for accomplishing this object was known than cupellation, or conversion of the lead into oxide, which left the bulk of the silver behind in a metallic state. Pattinson's process was based upon the fact that when melted argentiferous lead is allowed to cool, crystals are formed which are poorer than the original alloy. By repeated crys-tallizations the silver was concentrated in a smaller amount of lead. This process has, nowever, been almost universally superseded by Parkes' process of desilverization by zinc, which is based upon the fact that when a small percentage of zinc is added to argentiferous lead a rich alloy is formed on cooling, consisting of silver, lead and zinc, which, as it is lighter than the lead, floats on the surface and may easily be skimmed off or separated by liquation. This rich alloy is distilled in graphite retorts to remove the zinc and the rich lead obtained is cupelled. The process is one of concentration rather than of absolute separation. It still requires cupellation, a costly and wasteful process. Its chief disadvantages are a considerable loss of metal, amounting approximately from 3 to 5 per cent. of lead, according to the purity of the metal, and from 3 to 5 ounces of silver per ton. The multiplicity of the products is a serious item, as it is necessary to keep the products of refining separate from the rich products of desilverizing. and to keep apart the poor products from refining the market lead. This calls for a multiplicity of furnaces, and therefore for a large plant. The separate reduction of the products makes it necessary to accumulate large stocks before it is sary to accumulate large stocks before it is profitable to work a product, so that the interest on the stock is heavy. These facts add greatly to the cost of the process, and have stimulated metallurgists to seek some means of obviating them. They were partly directed to the application of mechanical contrivances for desilverizing proper, and partly to the introduction of special processes of working the rich alloy of zinc, silver and lead, but they did not prove successful.

Concious of these defects, we consider the Concious of these defects, we consider the

Conclous of these defects, we consider the process recently invented by N. S. Keith, of this city, as a new departure in the metallurgy of lead and silver which contains so many striking features of promise that a detailed description is warranted, although as yet its merits have only been tested on an experimental scale. The bullion is cast into thin slabs, over

which muslin bags are drawn. These are hung in vats filled with a solution of acetate or chloride of lead, which is acidulated in order to prevent the formation of basic salts. Alternating with the slabs of bullion are sheets of metal not affected by the solution, such as copper or lead, preferably the latter, in order to prevent the possibility of any admixture of copper with the pre-cipitated lead whenever it should become necessary to scrape the plates. The bullion slabs, the anodes, are connected by means of conductors with the positive pole of a dynamo-electric machine, while the sheets of metal, the cathodes, are connected with the negative pole. The electricity generated by the machine causes the lead of the anode, the base bullion, to dissolve and deposit on the positive pole the sheets of metal. With the exception of zinc, lead is the most electro-positive of the metals contained in the acetate or chloride solution, so that antimony, arsenic, tin, bismuth, silver, copper and gold remain behind, while pure lead is deposited on the cathodes in the form of fine crystals which fall to the bottom of the vat, while the precious and accompanying metals gather in the muslin bag. Zinc when pres-ent goes into solution, which it would tend gradually to make unfit for the work. As the bullion is cast at a low temperature its amount cannot reach more than I to I1/2 per cent., as lead does not retain more than that quantity. Zinc can, however, be electrically deposited in properly arranged

It is a question, which practice must deeide, whether it will prove more economical to refine the bullion previous to separating it or not. It is claimed that by using crude bullion the antimony which remains with the silver may be utilized by treating the products of refining the silver with nitrate of soda and borax, and that the losses of metal are reduced to a minimum by the ab-sence of any process subjecting it to the action of fire. On the other hand it should not be lost sight of that as arsenic and other metals are invariably present also, the separation is by no means a simple one, and that previous refining will yield silver of great fineness. The refining of the silver, too, is an additional operation, while it is a princi-ple of metallurgy to handle a product less the richer it becomes.

The completeness of the separation of the silver may be judged from the following analysis, from samples taken by the analyst Mr. Wm. E. Gifford. The original bullion held 161.7 ounces, and the lead deposited 0.02 ounces of silver per ton, which compares very favorably with even the poorest brands of lead desilverized by zinc the silver ranges from a trace to o.1 ounce The following is the full analysis of the

bullion treated

Copper . . . Antimony Arsenic . . . Zinc The poor lead held 0.000068 per cent of silver (0.02 ounces), and although a consid-

erable quantity was used for analysis, traces only of arsenic and antimony could be detected, while there was no copper. The experiments made on a small scale have shown that the dissolution of the bullion is quite irregular, so that the disadvantages of regular corrosion and the mixture of particles of lead with the fine silver are

avoided. Should this prove so on a large scale, the cost for remelting the silver would be low

A circumstance which may prove a great advantage to the electro-magnetic deposition of lead is its form, so favorable to a rapid and complete action of the chemical agents used in corrosion for the manufacture of white lead. The cost of the machine, (a 10 or 12 horse-power Weston machine) required for the deposition of 10 tons of lead per day is \$800. Mr. Keith estimates the cost of the deposition of 10 tons of lead per day is \$800. Mr. Keith estimates the cost of desilverizing one ton of bullion at \$4, while with the processes now in use it is from \$10 to \$15 per ton, according to locality and nature of bullion, exclusive of value of allowances made for loss of lead and silver. silver.

The Simonds Saw.

The Northwestern Lumberman, in an account of the method of saw making employed by the Simonds Manufacturing Company, says:

The ovens and other devices are entirely different from anything of the kind we have ever before seen, and must have required much thought and experiment to bring them to their present state of perfec-We saw many saws of all sizes temtion. pered and straightened with perfect success, and watched with much interest a 72-inch circular plate, which, in hardening, thrown badly out of shape, brought to fect plane in the tempering and straighten

ing process.

We also saw the tension of the saws changed with heat in any way desired. Those too loose in the center were made firm, vice versa, and without the use of the hammer. The ovens are so nicely adjusted as to carry any given degree of heat

Justed as to carry any given degree of heat for weeks with scarce.y a variation, which must of necessity insure the absolute uni-formity of temper claimed.

All workers in metals are fully aware of the fact that a piece of iron or steel once bent will bend easier the second time, and that a warped piece of steel made straight with a hammer has a tendency to return to its original position, and when pend into its original position, and when pened into shape, if the places or parts pened are cut away, it springs back as before. As the "Simonds" Saws are brought into shape with heat, the steel must remain in a natural state of the steel must remain in a natural state.

ral state, and evidently they will stand harder usage without getting out of shape than hammered saws. In developing this process it was early secretained that one of the elements of suc-

cess lay in the use of a very highly carbonized steel. Iron subjected to the proper degree of heat for tempering while under pressure will not set to a desired form, probably because the nature of the metal is fibrous, while iron carbonized into steel is granulous and as science has never set. is granulous, and as science has never yet been able to give a very satisfactory reason why carbonizing iron makes steel, nei ther can we explain this; but experiments have demonstrated that a highly carbonized

have demonstrated that a highly carbonized steel is by this process a necessity, while by the old the percentage of breakages makes its use practically prohibitory.

By actual tests the steel of which the "Simonds" Saws are made will stand a tensile strain of 145,000 pounds per square inch, against 100,000 pounds, the breaking strain of steel as generally used. This gives about 50 per cent, advantage in cutting about 50 per cent. advantage in cutting qualities, and also in the abuse which the saws will stand, aside from the advantages

heretofore named.

There is a satisfaction in recording a really meritorious improvement, and one developed by downright hard thought and persistent effort. These experiments have extended over a period of more than four years, at great expense, with the sole object of building up a solid, substantial business by plecing in the market on its ness, by placing in the market, on its merits, a better saw than has before been produced; and judging from various letters from some of our largest and most respon-sible lumber manufacturers, and the unmistakable evidences of a rapidly increasing business, we think they will succeed.

The proprietors desire us to correct in this connection some erroneous impressions; they do not claim that the saws, after using, they do not claim that the saws, after using, will never need to be readjusted, but they do claim that they will run longer than hammered saws, and with proper usage may never need readjusting. But, should they get out of condition, the slight change necessary to put them in order permits their being treated by a saw hammerer the same as any other saw.

The boot and shoe manufacturers of Chicago are considering the proposition of the Chinese Six Companies of California to furnish them with 1500 Chinamen, half skilled and half green workmen, at 75 cents a day for three years, in place of the 800 strikers. The plan was regarded favorably, but the general opinion was that from 40 to 60 cents a day would be adequate remuneration. No action was taken, but a further conference will be had with the agent of the Chinese companies.

The London Economist of the 10th inst., ays: United States government loans are again lower, the fall in the issue of 1867 during the past fortnight being as much as 11/2 per cent., for the reason that after the redemption of the 1865 loan, which it is announced will be completed this year, that security will be the next in order for repayment at par. Railroad issues have fully maintained last week's quotations.

A Geneva dispatch says Swiss makers of fine watches have been awarded grand diplomas of honor at the Paris Exposition, and an American maker has received a gold medal.

Sixteen tons of fine silver, valued at \$6,000,000, were shipped from the Assay office the other day to Philadelphia for coinage into standard \$1 tokens. There are 80 tons still remaining valued at \$3,000,000.

It is stated that glassware is about 15 per cent. cheaper than in 1860, or the year before the war, and the improvement in

THE BEST KITCHEN AND TOILET WARE.

It is made of

Decarbonized Iron and Covered with a Perfect Enamel of Unquestionable

Purity.



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CORRESPONDENCE SOLICITED.

Will make estimates on completed work when desired.

LIGHTNING HAY KNIVES,



This knife is the best in use for cutting down hay and straw in mow and stack, cutting fine feed from bale, cutting corn stalks for feed, cutting peat and ditching marches.

The blade is best cast steel, spring temper, easily sharpened, and is giving universal satisfaction. A few moments trial will show its merits, and parties once using it are unwilling to do without it. Its sales are fast increas ing for export as well as home trade, and seems destined to take the place of all other Hay Knives.

They are nicely packed in boxes, one dozen each, of 50 lbs. weight, suit able for shipping by land or water to any part of the world Manufactured only by

Hiram Holt & Co.,

East Wilton, Franklin Co., Maine For sale by the Hardware Trade generally.

SEMPLE & BIRGE MFG. CO., Agents at St. Louis.

OFFICE OF

F. HABERMAN,

Stamped, Plain and Japanned TIN WARES,

Patent Corrugated Bottom Coal Hods, 294 PEARL STREET,

NEW YORK, Aug. 1, 1878.

TO THE TINWARE, HARDWARE AND STOVE TRADE—GENTLEMEN: I am pleased to inform you that my new and greatly varied Price List is now completed and ready for distribution, and will be sent on application to any dealer.

The most important feature of this List is, the goods are all distinctly classified, prices and discounts named on same, a matter the trade will appreciate, as it avoids the constant necessity of inquiring for quotations on goods outside the regular line. Awaiting your favorable replies, I remain, yours, &c.

F. HABERMAN.

"WROUGHT BUTTS."

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ENGINEERS. IRON FOUNDERS & BOILER MAKERS.

Coal Miners and Fire Brick Manufacturers.

The Only Makers in the Southern States of

WASHED FOUNDRY COKE, Free from Slate and Sulphur.

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MINERAL LANDS,

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Offers for sale, at very low figures, some of the most valuable Charcoal and Coke Properties within the district. Full particulars furnished on application.

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BAR IRON, NAILS, RAILROAD SPIKES, FISH BARS AND BOLTS BRIDGE AND CAR BOLTS, AND FORGINGS GENERALLY.

ROANE IRON COMPANY,

Pig and Railroad Iron. CHATTANOOGA. - - - TENN

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RAILWAY FREIGHT CARS, Car Wheels and Castings.

TENN. COAL & RAILROAD COMPANY,

A. M. SHOOK, General Manager, - - Tracy City, Tenn.

Proprietors of the Sewanee mines, capacity of 6,000 bushels of coal and coke per day. Several important institutions of learning, including the University of the South, also the celebrated ershels Springs, are located upon the line of this Railross of very fine lands, offer special inducements to Being also the proprietors of several extensive tracks of very fine lands, offer special inducements to onless. Communications addressed to the General Manager will receive prompt attention.

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Fossiliferous Ores.

A superior article delivered at low figures at any trance within the district or at any point on the hot River. Refer to Roane Iron Co., Chattanooga on Co., or S. B. Lowe, Chattanooga.

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IRON AND STEEL DROP FORCINGS

All shapes, small and large, including

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IT HAS NO SUPERIOR. GUARANIEED

IN

EVERY RESPECT. Wrought Bar, Head and Screw.

Owing to the in. for these justly Popular Wrenches,

we are now manu facturing more than any other establishment in the world.

Our Wrench having been imitated by other manufactur ers, we have adopted the above Trade Mark, and will hereafter stamp all our goods.

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1st. It can be used as an ordinary Smoothing Iron. ed. It is a Fluting Machine as well as a Smoothing Iron. 3d. The Fluting Attachment being made of brass, and convex in form, it has all the advantages of the crank machine. 4th. It combines the two articles in one, taking up the room of but one machine, and is always ready for use.

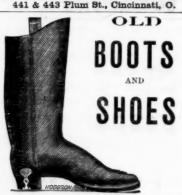
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Patent Lantern for Oil and Kerosene.



This Lantern is the most salable in the market; it burns Kerosene or Oil with superiority. The flame is regulated from the outside. The globe is removable. It is neat, Cheap, handy, compact and durable. It has more advantages than higher priced Lanterns. SEND FOR PRICE-LIST.

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Can be Straightened AND NEW ONES KEPT STRAIGHT

LYON'S PATENT Metallic

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PATENTED Feb. 27th, 1877, July 8d. 1877.





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B. W. PAYNE & SONS, Corning, N. Y., Established in 18 Eureka Safety Power.
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Also, Spark Arresting Portables and Stationary Engines for Plan-tations. Send for Circulars.

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Awarded the GRAND MEDAL of PRO-GRESS at WORLDS' EXPOSITION, VIEN-NA, 1873, being the highest awards on Pumps, &c., also, highest medal at PARIS n 1867, and Philadelphia, 1876, accompanied by Report of Judges.

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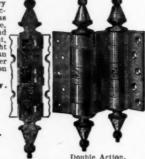
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Drilled and Wire Jointed. anned, Figured Enameled, Nickel Pinted and Real Bronze Butts. Also a full line of

IRON & BRASS PUMPS, &



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In Competition with the World at Philadelphia, 1876.

TWO FIRST MEDALS, and TWO DIPLOMAS OF MERIT

The following are the points that the Judges officially announce as the basis of their award of the hest honors to the Howe Scales :

lest honors to the Howe Scales:

For their Protected Bearings (the Howe is the only Scale with Protected Bearings), which makes the Scale DURABLY ACCURATE.

For their Strength.

For their Economy in Construction.

For their first-rate Material and Workmanship.

For their first-rate Material and Workmanship.

possessed by the HOWE).

The Improved Howe Scales

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Are Guaranteed Superior to all others.

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YALE LOCK MFG. CO.,

Stamford, Conn., U. S. A.

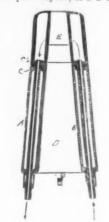
ISALESROOM,

New Patents.

We take the following abstract of new patents, recently issued, from the official

TUYERE.

To Jacob Mackey, Steubenville, O.—April o.—A two-part tuyere, A B D E, provided



with the closed bottoms cc', as shown and described, to obviate the necessity of joints and prevent leakage.

CLOTHES WRINGERS

CLOTHES WRINGERS.

To Wm. Hill, Sennett, N. Y.—May 14.—
The combination of the conical hub R, the flanged bearing plate T and the gear wheels Q P, with the journals of the rollers D E and the standard A of a clothes wringer.

2. The combination of the sleeve W and the gear wheels V U with the conical hub R, the flanged bearing plate T and the gear wheels Q P, and with the roller journals and standard of a clothes wringer.

3. The combination, with the gear wheels P Q U V, conical hub R and ring-flanged plate T, of the grooved sleeve W, the grooved tube X and the tongued crank Y, the latter adapted to transmit power either through the parts X P Q or the parts W V U, whereby the leverage of the crank or the relative rates of speed of rollers and crank may be changed as desired.

4. The combination of the rubber springs M with the bolts and straps I K J, the mova-

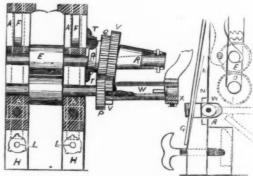
in courses, rabbeted at their upper, outer and lower inner edges, and secured together by wire thongs or bands set into and concealed and protected by the overlapping

In combination with the iron column and the incombustible and non-conducting rab-beted blocks, the wire bands or hoops, covered and protected in joints of the block

WRENCH.

To G. S. Goodspeed, Providence, R. I .-April 30.—The combination of the handle A.





ble jaws H, the bars G, whether elastic or rigid, the bent levers F, the journal of upper roll E, the hand screws I and the stan-

rigid, the best severs F, the journal of upper roll E, the hand screws I and the standards A.

MEASURING FAUCET.

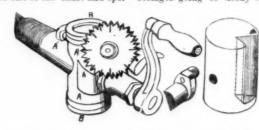
To Wm. J. Lane, Millbrook, N. Y.—May 14.

—1. The combination, in a measuring faucet, of a casing having inlet and outlet ports, and containing a plunger having face ports opening toward opposite ends, and a crank shaft whereby the plunger is both reciprocated and turned on its axis to bring each of its ports alternately to coincide with the inlet and outlet ports of the casing and forcibly remove and expel the liquid.

2. The combination of the reciprocating plunger and the driving shaft F connected directly thereto, and imparting both a reciprocating and rotary movement to the plunger. reciprocating and rotary movement to the plunger.

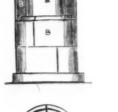
3. The combination, in a measuring faucet, of the casing, its plunger and the shaft F, arranged opposite and at right angles to the axis of the plunger, and connected directly thereto by a crank or its equivalent.

4. The combination, in a measuring faucet, of the casing, the driving shaft F, the plunger reciprocating in the chamber of the casing across the end of the shaft and oper-



FIRE-PROOF COLUMN.

To Peter B. Wright, Chicago, Ill .- May





ated therefrom, and the ports a a' a'' of the casing and ports e e' of the plunger.

5. The casing A, having branches A' A'', and with a transverse chamber, closed by detachable heads B B.

Two large gas furnaces upon the improved

Two large gas furnaces upon the improved system have been put in blast at the Clyde Ironworks, Scotland. These furnaces have been in course of preparation for the last twelve months, and, being the first erected on this principle in connection with these on this principle in connection with these ironworks, the expenditure on tubing and fittings for the whole works was necessarily great. The cost of the entire erections in connection with the two furnaces will probably be over £10,000. The new furnaces are raised to a hight of fully 100 feet, being 40 feet higher than the ordinary blast-furnace, and, from their increased cubic capacity as well as from the advantages of the ity, as well as from the advantages of the gas system of working, they are expected to yield a much larger produce of pig iron than the furnaces of the old system.

onn., U. S. A.

The Singer Manufacturing Company announce that the sales of their sewing machines during the months of January, February, March and April, 1878, were for per cent. greater than during the corresponding months of 1877, and in 1877 this company sold over 20,000 more machines than in any previous year.

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HAND-CUT. Manufactured by JOHNSON & BRO

No. 1 Commercial Street, Newark, N. J. Chas. Spruce & Co.,

Manufacturers of HAND CUT

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CHALMERS & MURRAY,

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"Superior in Every Respect." This is one of the best -elling Locks in the market and affords the dealer a large profit. It is thoroughly made—of the best material—very hand ome in appearance, and every Lock is warranted. Orders solicited. Address as above Lack Box 105, Bridgeport, Conn

We desire to call the attention of the trade to

Steel Horse Shoe Nails, made from metal prepared in the Martin-Siemens Furnace by our PATENT process, which produces a

PERFECT HORSE SHOE NAIL.

The well-known desirable properties of a perfect

nail are, that the POINT should be sharp, the SHANE stiff, to drive without crippling under the hammer, sorr enough to clinch readily, while sufficiently

tough to avoid all danger from the "drawing the clinch" or breaking the neck under the head.

"ANVIL HORSE NAILS." In the process of manufacture the metal is com-

pressed under the head, which gives the nail great

strength where it is required (between the shoe and hoof), and the cold rolling gives it a stiffness attained in no other way, while the quality of

the metal used insures a clinch and point un-

surpassed by any nail ever offered in the market. Samples and prices sent on application

ANVIL NAIL CO., 65, 67 and 69 Washington St., New York

Grant Fan Mill & Cradle Co.

Grant's Grain, Coffee, Rice, Cochineal and Pimento Fans,

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TURKEY WING GRAIN CRADLES,
4, 5 and 6 fingers,
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4 fingers,
SOUTHERN PATTERN GRAIN,
CRADLES,
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All of a superior graity. None

4, 5 and 6 ningers.
All of a superior quality. None enume unless marked Grant an Mild Cradle Co. Send for lustrated catalogue & price list.
P. O. Address, Melrose,
Rensselaer Co., N. Y.

nail having all the requisites for a

These properties we claim for the

G. F. Warner & Co., Carriage Clamps We have also on hand a general assortment of He

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Domestic and foreign buyers who are desirous of handling a superior File or Rasp should send us their orders. Gentlemen visiting the Exhibition Universelle in Paris are invited to examine our exhibit at D $_3$.

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For everything (and every size), from a hat or cap to an exhibition building Kitchens, Laundries, &c., ventilated without draft. Durable, strong, without rivets or solder. Oiled for six months. Each one has storm cap. Retail price, size six inch diameter, \$1.00 and upwards; apparatus with which any one can cut circles in glass, 15 cents each.

Projective Ventilators avoid drafts, exclude dust, dampness, malaria and germs of disease; adopted y hospitals, schools, institutions, &c.; applied to any window or room.

Prof. A. L. Looms, M. D., University of City of New York, writes as follows:

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ries and school rooms."

AIr Filters and Moisteners, placed over hot air registers of furnaces, &c., prevent dust and supply can filtered air. Prices and discounts to the trade sent on application.

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is overcome. olied with enlarged edge and instructions Manufacturers, Carpenters, Builders and o make slots in Sashes, Doors, Moidings, make perfect Weather Strips.





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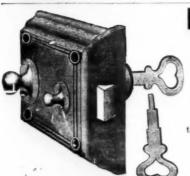


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ALSO LANE'S PORTABLE COFFEE ROASTER Will roast 30 to 40 lbs. at once, and can be used as a stove at other times. Send for descriptive list to Manufacturers,

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Our agents, Graham & Haines, 113 Chambers St., New York, carry a full line of our goods, and will be pleased to serve you at Factory prices.



Extension Cylinder Night Latches.

KING'S PATENT, June 26, 1877.

Cylinders adjustable for doors from 11/4 inch

to 2 inches.

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Black Diamond File Works.







Awarded by Jurors of Centennial Exposition, 1876, for "VERY SUPERIOR GOODS."

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ESTABLISHED 1848.

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HAMMERED MO FINISHED

Ausable

Are Hammered Hot,

And the Finishing and Pointing are Done Cold,

Thus Imitating the Process of Making Nails by Hand.

Quality is Fully Guaranteed.

For Sale by all Leading Iron and Hardware Houses.

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Patents of Root's Wrought Iron Spiral Pipe.

The Abendroth & Root Manufacturing Company, sole owners of the Letters Patent, and manufacturers under the same, of Root's Spiral Metallic Tubing, grooved and riveted seam, now offer for sale the territory west of the Rocky Mountains, in the United States, and the Letters Patent issued for Canada and all other foreign countries, together or separately, including complete working drawings or machinery (if required) for manufacturing.

The success of this company in the introduction of Spiral Tubing throughout the States and Territories east of the Rocky Mountains, is a sufficient guarantee that the business cannot be otherwise than successful wherever entered into.

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ABENDROTH & ROOT MFG. CO.,

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Shoe Nails, Fine Two Penny and Three Penny Nails, Channel, Cigar Box and Chair Nails, Leathered Carpet Tacks, Glaziers' Points, Etc.

Cut Showing Round Platterm.

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ANSONIA

With Ornamented Mouldings.

PATENT APPLIED FOR.

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Any variations from the regular size or shape of the above-named goods made from samples to order.

Machinery

Chicago.

The Upright Family Scale



With Tin Dish. Weighing 12 lbs. by 1/4 lb. List \$16 per

Dozen. Liberal Discount

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attachment for Taking the Tare. Just the thing for family use.

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Measuring Tapes, Pat. Spring Measuring Tapes of Lines and Steel.
FINE TEMPERED STEEL SPRINGS,
FINE TEMPERED STEEL BAND SAWS,

PRIZE MEDALLISTS:

London, 1862; Oporto, 1865; Dublin, 1865; Paris, 1967; Moscow, 1872; Vienna, 1878, and only Award and Medal for Self-Coiling Steel Shutters at Centennial Exhibition, Philadelphia, 1876.

CLARK & CO.,

ORIGINAL INVENTORS AND SOLE PATENTEES OF

STEEL SHUTTERS,

FIRE AND BURGLAR PROOF. Also Improved

Rolling Wood Shutters

of various kinds. Clark's Shatters are the Best and Cheapest in the world. Are fitted to new Tribuse Building, Lenox Library, Delaware and Hudson Cans I Co.'s Building, Transalantic Steamship Co.'s new Dock, American News Office, &c., Posey County Court, Oregon, Mo. Also to buildings in Boston, Checinant, Detroit, Janesville, Wis., Baltimore, Canada, &c. Have been for years in daily use in every principal city throughout Europe, and are incorsed by the Leading Architects of the World.

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Office and Manufactory,

162 & 164 West 27th Street, N. Y.

ANSONIA CORRUGATED STOVE PLATFORM

Ansonia Brass & Copper Co. Office, 19 & 21 Cliff Street, NEW YORK.

The Ansonia Corrugated Stove Platform, with its heavy figured ogee border, is believed to be the best Platform offered to the trade. As shown in the illustrated section herewith it equires no nailing to keep it in place or to prevent it from turning up at the edge; while the metal is of sufficient thickness to require no lining.

no lining.
The low price, superior quality and fine finish of this Platform will be readily acknowledge. ged. Packed 24 in a case. send for price list.



UNION CHAIN WORKS, REITER & MORTON,

Pittsburgh, Pa.,

Coil, Cable, Crane, Railroad, Wagon and Agricultural Chains,

From Best Standard Brands of Iron. Our Chains are all thoroughly tested and warranted, and will be found equal to the best of either home or foreign make

Prices the very Lowest.

PHILIP S. BIGLIN. Successor to W. F. SHATTUCK & CO.,

AMERICAN HARDWARE, 100 Chambers St., New York.

attuck's Union and Counter Scales.

ilan's Axes, Hatchets, Picks, &c.

ilman's Gimlet's, dimiet fitte, &c.

swold's Augers, Auger Bits, &c.

r's "Genuine" Wrough Cos.

Bells, Wells, Steel Cos.

Bells, Wells, Well

Maithy's Britannia and Cocoa Bippers.
Eddy's Reflued Lamp Black.
Eagle'' A Pick and other Handles.
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Cortiand Forged Horse Nails.
Tackie Blocks, Spokes, &c., &c.

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MANUFACTURERS OF

Noiseless Self-Coiling Revolving United States Standard Rules,

AMES' UNIVERSAL SQUARES, Patent Hardened Cast Steel Try Squares,

THE AMERICAN STANDARD WIRE GAUGE.

Bevel Protectors, Hardened T Squares and Bevels, Center Gauges, Steel, German Silver & Boxwood Triangular Scales, Vernier Calipers, Caliper Squares and Rules, Plumb Bobs,

Paper Drawing Scales, Willis' Odontographs, Steel Straight Edges, and T Square Blades.

MEDALS AWARDED: Paris Exposition, 1867; Vienna Exposition, 1873; Philadelphia, 1876. Illustrated Catalogue sent per mail on application

Earnings of the Workingmen of Liverpool and Neighborhood.

Mr. Fairchild, our Consul at Liverpool, in a recent exhaustive report on the wages and cost of living of the mechanic and laboring classes in and around Liverpool,

I beg leave to report the following as the result of careful inquiries made by me in this and other towns in this consular dis-

TRADES IN LIVERPOOL.

Millwrights and fitters, 9 hours per day, 1/2 per week; pattern makers, 9, 35/; irners, 9, 35/; smiths in all branches, 9, 35/ turners, 9, 35/; smiths in all branches, 9, 37/; molders, 9, 37/. No change in hours or rates for last 5 years. Every 2 hours overtime up to 9 o'clock p. m., paid for as a quarter of a day, and after 9 o'clock p. m. each 2 hours counted 3 hours.

Brass founders and compersmiths a hours.

p. m. each 2 hours counted 3 hours.

Brass founders and coppersmiths, 9 hours per day, 34/ per week. No change in wages or hours during past 5 years. Ship carpenters (wood and iron), 9 hours per day, 42/ per week; joiners, 9, 39/. No change for last 5 years. Overtime 1/ per hour to 10 p. m., after that double time.

Painters, in summer, 9½ hours, 34/ per week; in winter, 9 hours, 32/. No change in 5 years. Overtime, each hour calculated as ½ of a day to 9 p. m., 9 to 12 p. m. paid time and a half, 1 a. m. to 5 a. m. paid double time. Saturdays, 1 p. m. to 7 p. m., time and a half, and after that double time.

time.

Boiler makers, 9 hours, 30/ to 42/ per week; joiners (building), 9 1-6 hours, 37/.

Previous to May I, 1877, rate for joiners was 7¼d. per hour. May I, 1876, 6¾d. per hour, and it stood at the latter figure for fully 3 years previously. Overtime, 5.30 to 9.30 p. m., time and a quarter; 9.30 p. m. to 11.30 p. m., time and a half; 11.30 p. m. to 5.30 a. m. double time. Stone masons, Feb. 1 to Nov. 10, 81/4

to 5.30 a. m. double time.

Stone masons, Feb. 1 to Nov. 10, 8½ hours, 37/1½ per week; Nov. 11 to Dec. 4, 7 5-6 hours, 35/3; Dec. 5 to Jan. 10, 6 11-12 hours, 31/1½; Jan. 1 to Feb. 1, 7 5-6 hours, 35/3. No change in wages, but a reduction 2 years ago of 5½ hours per week. Bricklayers, in summer, 9 1-6 hours, 41/3 per week; in winter (Nov. 1 to March 1) 7 11-12 hours, 35/7½. Probably no material change in last 5 years. Slaters and plasterers, 8½ hours, 40/ per week. In 1875, and probably 1874, working hours 9 1-6 per day, wages 34/ per week, and in 1877 the rate now prevailing.

Plumbers, in winter, 8 hours, 35/7½ per week; in summer, 9 hours, 38/11½. Present wages obtained 3 years ago, and during the previous 2 years wages were 7¼d. per hour in summer and 8½d. per hour in winter. No change in hours. Printers and paper hangers, 9 1-6 hours, 35/ per week; grainers and decorators, 9 1-6 hours, 30/ per week. No change. Gas fitters, 9¼ hours, 32/ per week. Sundry changes in last five years as to reduction in hours and increase in wages, which I cannot obtain particulars of. Tin plate workers, 9 hours, 31/ per 50. in wages, which I cannot obtain particulars in wages, which I cannot obtain particulars of. Tin plate workers, 9 hours, 31/ per week. A reduction in working hours last 5 years of 6 hours per week, and wages in-creased during the same period about 3/ per

Cabinet makers, 9 hours, 34/. In 1874 hours the same; wages, 32/. Upholsterers, 9 hours, 36/ per week. Rate obtained 12 months ago. Previous 4 years no difference in the same of the same in hours, but wages were 33/ per week. No change. Usually paid by piece work. French polishers, 9 hours, 31/ per week. Paid according to skill and industry, wages varying from 26/ to 50/.

varying from 26/ to 50/.

Wheelwrights, 9 hours, 32/per week. Advance in last 5 years about 5/per week.
Coach builders, 9 hours, 34/per week. No change. Saddlers, 9 hours, 28/. No change.

Watchmakers, 9 hours, 36/per week, rough average; paid by piecework. Pianoforte tuners and repairers, 8 hours, 38/per week; no change. Boot and shoe makers, 9/2 hours, 36/per week; paid according to work done. General laborers, 9 hours, variable; wages would probably average 24/per able; wages would probably average 24/ per

Prices of articles sold in small quantities to workingmen in Liverpool: Tea, per lb., 1/8 to 3/6; coffee, per lb., 1/ to 1/8; sugar, moist, per lb., 2½d. to 4d.; sugar, lump, per lb., 3½d. to 4d.; rice, per lb., 2d. to 5d.; sago, per lb., 4d. to 5d.; tapioca, 6d. to 1od.; beef, 8d. to 1d.; potatoes, per peck, 1/3 to 1/6; flour, 6 lbs., 1od. to 1/2; oatmeal, 6 lbs., 1o½d. to 1/; peas, white, per qt., 2½d. to 3d.; peas, green, per qt., 4d. to 5d.; Prices of articles sold in small quantities 16 lbs., 10½d. to 1/; peas, white, per qt., 2½d. to 3d.; peas, green, per qt., 4d. to 5d.; bread, 8-lb. loaf, 1/ to 1/4; milk, per qt., 3d. to 4d.; ribs pork, per lb., 4d.; mutton, per lb., 8d. to 11d.; lamb, per lb., 1/ to 1/2; veal, per lb., 7d. to 10d.; ham, per lb., 8d. to 1/; bacon, per lb., 6d. to 10d.; pork, fresh, per lb., 7d. to 9d.; butter, per lb., 1/ to 1/6; cheese, per lb., 6d. to 10d.; lard, per lb. 8d. toggs, per lb., 6d. to 10d.; lard, per lb. 8d. toggs, per doz., 7d. to dd.; tongues. lb., 8d.; eggs, per doz., 7d. to od.; lard, per lb., 8d.; eggs, per doz., 7d. to od.; tongues, ox, per lb., 7d.; tongues, pigs', per lb., 6d.; cocoa, per lb., 6d. to 2/; corn flour, per lb., 8d.; candles, per lb., 6d. to 1/2; barley, per lb., 2d. to 3d.; biscuits, per lb., 4d. to 1/4;

lb., 2d. to 3d.; biscuits, per lb., 4d. to 1/4; soap, per lb., 2d. to 5d.; coal. per ton, 15/to 18/.

The rents paid and the price of clothing are as follows: Laborers' houses, off of main streets, three to four small rooms, 2/6 to 4/6 per week; cottages, better class, four or five rooms, from 5/to 7/per week; artisans' cottages, five rooms and attic, from 5/6 to 8/6 per week. Laborers' and artisans' working suit of clothes can be obtained for from 30/ to 40/, and Sunday suit for from 60/ to 80/. working suit of clothes can be obtained for

AT ST. HELEN'S

and immediate vicinity wages are as follows:

Plate Glass Works.—Laborers, 18/ per
week; mechanics' laborers, 22/; mechanics, week; mechanics' laborers, 22/; mechanics, 33/; glass grinders, 43/; women (experienced), 15/; polishers (boys), 14/; casting hall mixers, 29/; furnace and table men, 39'; polishers (men), 32/; pot makers, 39/; glass grinders (boys), 10/; women (young), 5/; warehouse packers, 18/ to 27/; blacksmiths, 34/; sandmen, 28/; plaster burners, 36/; smoothers and overlookers, 45/.

Iron Works.-Engineers, 34/ per week fitters, 32/6; turners, 32/; pattern makers, ing no university, but we have done our 34/; molders, loam, 36/; molders, green-best. We are a racing people, and have sand, 34/; smiths, 36/; strikers, 24/; join-named our best stallion after you,"

ers, 35/; boiler makers, 35/; platers at angle smiths, 38/ to 40/; holders-up, 28/riveters, 32/6; laborers, 19/; planers, 28/

grinders, 28/

The wages paid to agricultural laborers varies from 18/ to 22/ per week. The navies employed in public works and railways earn from 27/ to 30/ per week, according to the description of the work on which they happen to be employed. It is a very diffi-cult matter to arrive at a correct average of colliers' wages, as some men can earn so much more than others in the same mine during the same hours, but I am informed that 24/ per week is considered at the pres-ent time a good week's wages, and there are not many men who earn more, and a great

many who do not earn so much.

In the chemical works most of the men are employed on piecework, and in the various works there are different regulations, so that, as in the case of colliers, it is not easy to arrive at the average weekly earnings of the men. The best estimates I can obtain are as follows, for weekly wages: Laborers, 18/; white ash men, 35/; soda pan men, 26/; alkali finishers, 40/ to 50/; black ash, 33/; salt lake men, 38/. The builders pay the men in their employ who work 54 hours per week as follows: Bricklayers, 9d. per hour, 40/6 per week; bricklayers' laborers, 6d., 27/; joiners, 8¼d., 37/½. The wages now paid as compared with those paid five years ago are very much the same in the cases of ordinary and agricultural laborers. The list I have given you of wages paid to workmen in plate glass easy to arrive at the average weekly earnof wages paid to workmen in plate glass works is, I believe, exactly the same. Some of the wages in the iron works have undergone some reductions, and the chemical workmen and colliers have been very considerably reduced. During the years 1872 and 1873 they received advances in their wages, and I think the reductions only take

wages, and I think the reductions only take off about the same percentage as the additions that were then made.

Prices of Food.—Flour, 5 to 6 lbs. for I/; meat, per lb., rod. to I/; bread, per lb., 2½d.; bacon, home cured, per lb., rod.; butter, salt, per lb., I/o I/o; do., American, 5d. to 8d.; cheese, per lb., 8d. to I/; rice, per lb., 1½d. to 2d.; oatmeal, per lb., 2½d.; potatoes, per bushel, 6/6; sugar, per lb., 2½d. to 4½d.; coffee, per lb., I/o; tea, per lb., 2/6 to 3/6; milk, per quart, 4d. The cost of living has varied very little; if anything it is perhaps a little more expensive now than five years ago.

anything it is perhaps a little more expensive now than five years ago.

The population is almost entirely composed of workingmen. They are all paid weekly except colliers, who are paid either fortnightly or every three weeks. A large proportion of the work is piecework.

The state of trade could hardly be in a more depressed condition than it is now. Chamical coal iron and class trades are all

Chemical, coal, iron and glass trades are all suffering severely; in fact, it has never before been known to be so bad in this district. The manufacturers have been looking for an improvement for the last two years, but matters instead of improving seem to have been getting worse.

AT WARRINGTON

and the immediate vicinity wages are as

File makers (skilled), 26/ per week. No change in the past five years. Flint glass makers, £2 to £5 per week. There has been makers, £2 to £5 per week. There has been an advance of from 10 to 15 per cent. during the past five years. Iron puddlers, 30/per week; higher grade, 40/per week. Fitters, molders, &c., 32/per week; unskilled laborers, 20/. The comparative rate of wages has been during the last five years nearly 15 per cent. higher than at present for all labor in this trade, with the exception of fitters and molders, who have been tion of fitters and molders, who have been

tion of fitters and moiders, who have been paid only about 5 per cent. higher.
Wire drawers, about £2 per week. No change in past five years. Wire workers, 30/per week. No change in past five years. Unskilled laborers, 20/per week throughout the town and 18/per week in the country. No change during the past five years.

The prices of articles which were here.

The prices of articles which may be termed the necessaries of life, house rent and clothes, are about the same as the prices at Liverpool.

AT HOLYHEAD,

North Wales, and the immediate vicinity North Wales, and the immediate vicinity the wages are as follows: Agricultural laborers, 10/ per week and found; navvies employed at principal works, from 3/9 to 4/ per day. Mechanical laborers, 18/ to 22/ per week; blacksmiths, 28/ to 32/; boiler makers, 28/ to 34/; platers, 30/ to 36/; fitters, 28/ to 34/; house joiners, 27/. There has been no change for the past few years. The necessaries of life cost about years. The necessaries of life cost about the same as at Liverpool. Rent of small cottages for laborers from 3/to 4/per week. Rent of small cottages, of a better class, for skilled mechanics, from 4/6 to 5/6 per week. House rents have increased 20 per cent. during the past two years.

General trade and commerce at Liverpool

are in almost as bad a condition as is possi-ble without bringing many of those engaged therein to utter ruin

An English court has decided that if a An English court has decided that if a person is sent by his employer to get a check cashed, and spends or pockets the proceeds, he is not guilty of theft. The only thing that can be done is to bring a civil suit for the recovery of the money, which may be beyond recovery. The argument is that the check is not stolen, as it is placed in the hands of the person aforesaid by the owner for a purpose, and the money is not stolen. for a purpose, and the money is not stolen as it was not in the possession of the owner.

East Liverpool, Ohio, has the largest potteries devoted entirely to ironstone china and decorated ware in America. Firms that formerly gave employment to 60 and 70 hands now have work for 200 and upward, and the whole number employed in the potteries is now over 2000 men, women and children. The shipments of crockery from that place from January 1, 1878, to June 4 were 29,479 packages.

A London magazine says that Prof. Huxley was lately visited by a Kentuckian admirer who said: "Sir, we admire your writings, and have shown it. We had no scientific distinction to confer on you, hav-

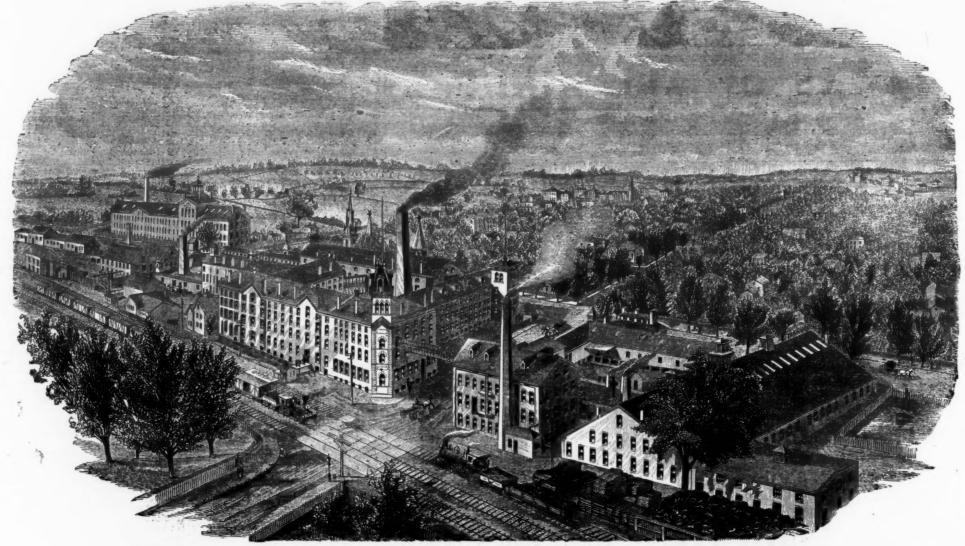
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Screw Factory.

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Finishing Shop

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IRON AND BRASS WOOD SCREWS.

Our Screws are always for sale at LOWEST prices made by responsible manufacturers.

We do not guarantee prices.

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Solid Steel Scissors, Shears, Razors, Russia Leather Strops, Hones, &c.

"ELECTRIC RAZORS,"

And the "ELECTRIC SHEARS." Nickel Plated

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The Oldest Manufacturers of Table Cutlery in America.

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STANLEY RULE AND LEVEL CO.,

Improved Carpenters' Tools.



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Hardware, Cutlery, Sad-

dlery, Metals, &c.

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All of Gardner's Patent Knives are fully warranted.





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Sole Manufacturer of the

Celebrated "Gem" Coal Hod.

Patented September 21st, 1875.

These Coal Hods are made in three styles, Japanned, Bronze and and Galvanized, and in five sizes, viz., 15, 16, 17, 18 and 20 inch. They are all made of Refined Iron, with bottoms double seamed and the rims riveted to the body of the Hod. We also manufacture a large assortment of House Furnishing Goods. Send for illustrated catalogue and price list.

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Electro Plated Ware, German Silver and Britannia Spoons.



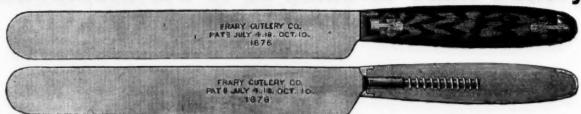
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TWATER THE ALL The above Illustrations represent their New Patent Screw Tang Lock Fast Solid Handle Entfe. There is no question but that a solid handle Knife is much more preferable than a scale tang. The great objection to their use hitherto is, that no solid wood handle has been placed on the market with the handle properly secured—no handle put on with cement will stand the wear and tear of every day usage. The cement will expand and contract with the action of heat and cold, and become loose, crack and come off, causing great prejudice against their use. This objection is overceme in our pasent series with the action of heat and go of the Knife or Fors, and sorewed firmly and securely in the handle and is clocked there by the boister, making a very strong leat and handsome snife, which we warrant never to get loose, crack or come off. We manufacture a large variety of patterns, both Table. Butchers and Carvers, and furnish the neartest nandle nearly as low as the scale tang. We are prepared to furnish this line of goods, together with the scale tang and iron handle, very promptly, and very respectfully invite the attention of the trade.

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Table & Pocket Cutlery,

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WALKILL RIVER WORKS, Walden, Orange Co., New York. THOS. J. BRADLEY, President.

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Agency of Har BROS. & CO., WALSALL, ENGLAND GENERAL HANDWARE MERCHANTS, And of



These Shears are unsurpassed for cheapness, durability and utility. They are made of one solid place of steel from point to point, and cannot be broken in use, either in the bow or at the function of s'ank and blade. Samples can be seen at above address, or sample lots furnished. Depot for "THE CROWN" SOLID BOX VISES. A cheap and swellent Vise.

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An Improvement in Stove Pipes

Mr. J. S. Brooks, No. 211 Water street, New York, is introducing a new stove pipe, which differs from the ordinary pipe with riveted joint or seam in having a simple fold of the sheet iron over the heads of the rivets after they are placed in the holes along the edge of the sheet. This fold holds the rivets



firmly in position and permits the seams to be left open for greater convenience in pack ing for transportation. The purchaser com-pletes the seam by closing the free edge over the rivets and heading them in the usual way. As the work of punching, inserting the rivets and folding is done by machinery, the fitting is accurate and the labor of finishing the pipe by closing the seam very

Prospects of the Brazil Line.

"Who owns the Brazil line of steam-ships?" and, "How are these superb vessels sustained?" are questions often asked. It is obvious that the small subsidy received from the Brazilian government added to the receipts on account of freight and passengers, receipts on account of freight and passengers, at the present low rates, can afford no adequate support. Our understanding of the matter is that Capt. Spicer, of Mallory & Co.'s steamship line, is interested with Mr. John Roach as co-proprietor in the enterprise, but that no others are associated; that in fact the builder of the ships has probably a nine-tenths interest in the line. A day or two ago Capt. Spicer was asked concerning the experiences of the line thus far, the amount of cargo offering, &c. He stated that there was considerable freight going, so that the two steamers already dispatched went out about full, though at low rates of freight for the encouragement of shippers. The next will do still better in this respect. At first flour comprised almost the entire cargo, but now there was noticed a large increase in miscellaneous articles. Butter, cheese and lard are large items comparcargo, but now there was noticed a large increase in miscellaneous articles. Butter, cheese and lard are large items comparatively, and there are now going out more dry goods, hardware, machinery and nicknacks. This steamship line, he remarked, can be made to sustain itself and eventually work up a large business. The increase, it is evident, must be made up in no small degree by a diversion of trade from Great Britain. This is understood, and, as might be expected, American enterprise is obstructed in every possible way by those who have so long held possession of South American markets and who cannot easily be dislodged. 'First of all,' said Capt. Spicer, "our people must learn the wants of the Brazilians and cater to their special needs. Goods of a certain style of package sell readily, whereas if put up differently they will not be tcuched. The English well understand this peculiarity. Take potatoes, for example. If forwarded in barrels they find no buyers, but if in boxes there is a good market. The latter would realize a third more money because the packages are in their style. To attempt to reason about it would be quite useless; and so of merchandise of whatever kind, it is essential to know exactly what the people want." is essential to know exactly what the people

In regard to European competition, Capt. Spicer remarks further that the English fully realize that their interests in South America are hazarded by the new comers, who are looked upon as intruders. They are making every effort to retain their They are making every effort to retain their trade by reducing freights on their ocean steam lines, extending mercantile credits, catering to prejudices, &c. They predict the certain failure of the American line. The Brazilian government, on the other hand, evinces a friendly disposition and seems inclined to cultivate trade with the United States. The Emperor is known to have encouraged the local newspaper press in a course consistent with this view. On his recent visit to the new steamer City of Rio recent visit to the new steamer City of Ric de Janeiro, he spent three hours on board the vessel inspecting every part. The engi-neer, in reporting his observations to the owners, says his Majesty Dom Pedro changed his coat and went all through the enained his coat and went an through the ongine and boilers, penetrating where others seldom venture, and "got all over grease and ashes." His friendliness could not be questioned.

The English have no less than thirty-five

steamers running on the Brazilian coast, all at low rates, but the American owners mani-fest pluck and confidence, believing they will gain a permanent foothold. They express regret at the failure of their application to Congress—"not so much on account of the subsidy," they say, "as on account of the prestige to the line," and the "evidence of permanence" which such a measure would give. It is noticed that travel as well as general freight is increasing.

In 1860 the United States took 227,000,000 yards of British cotton goods. In 1877 we took only 81,000,000 yards. In the year first mentioned Great Britain used half the whole cotton crop of the world; last year she used only 3,017,000 bales, against 8,959,-000 bales used elsewhere. English manufacturers explain the relative falling off by the increase of capital elsewhere and the ability of other nations to cope with them in power and organization, and add that the race will be to the frugal, the industrious and endur-

The motion of Sir John Lubbock, providing for the addition of elementary science Importers, Manufacturers and Dealers
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Cutlery and French Grindstones,
152 Centre, cor. Walkers St., N. Y.
Ground sides Ranors of all brands imported and conceved by steam power for the trade. Price for conceving from \$5 to \$5 per desen. Frice list sent on application.

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The trade are cautioned against imitations, made to sell, and which are without any mechanical principles to recommend them. Moore's Anti-Friction Hay Fork Pulley.

The main wheel contains four anti-friction wheels which revolve upon axles fast in its sides. The main wheel revolves nine times while the anti-friction wheels are revolving once.

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The Iron Age.

Metallurgical Review.

New York, Thursday, August 15, 1878.

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Har dware and Metal Prices,

Elsewhere will be found an announcement of the death of Thomas Whitwell of Stockton-on-Tees, well known in this country as an enterprising and successful ironmaster. a practical inventor and a cultivated, largeearted gentleman, identified with American

company which is investing large sums of of their predecessors. In the iron business English capital in iron-making and manufac-turing plant, mining operations and public improvements, at South Pittsburg, Tenn. The letter of Mr. James Bowron, general manager of the company's works, gives all the information yet received as to the cause of Mr. Whitwell's untimely death, which seems to have resulted from an accident in which he was by some means scalded. The news of this gentleman's death will be received with great regret in this country, where he was widely known, personally and by reputation. We are not informed as yet whether his death will make any change in the plans and operations of the company, which thus, for a second time within a few months, suffers the misfortune of losing a responsible head.

Speculations and Facts as to Pig Iron.

We have received the following letter an answer to which is requested in our

CINCINNATI, August 8, 1878. To the Editor of The Iron Age-DEAR SIR By answering editorially the following you will greatly oblige: I. As the cost of pig iron is governed by the price of labor (the value of the minerals in the ground being very small), would not an advance of wages to prices ruling in 1874 and 1875 cause an advance in the cost of making iron

cause an advance in the cost of making from
to about the cost of making it in those years?

2. Would not a general improvement in
business produce such an advance in price
of manual labor?

3. Would not this compel
a considerable advance in the price of pig
iron, and would the present idle furnaces,
which lost money in 1874 and 1875 at the
cost then of making and the prices realized
then for selling, he any obstacle in the way. then for selling, be any obstacle in the way of a decided and material advance in prices in a time of business activity? Respectfully,

Our opinions on the subjects concerning which our correspondent makes inquiry can scarcely be expected to possess any great value, for the reason that he deals with suppositions rather than with facts. will, however, give our views as clearly and briefly as possible:

1. An advance in the wages of miners and furnacemen would undoubtedly advance the cost of making pig iron. Whether it would advance it to the figures making up the cost of pig iron in 1874 would depend upon other considerations, chiefly the cost of transportation and the extent to which the companies mining rich ores could control the market. The average cost of making a ton of pig iron under favorable conditions in Eastern Pennsylania in March, 1874, was \$33.47, made up of the following items :

\$33-47

Whether an advance in wages to 1874 figures would also advance ore and coal to the prices then obtained, would depend very much upon whether the demand was great enough to sustain such prices. Probably it would not be.

2. No such general improvement in busi ness as can be expected for some years to come, is likely to restore wages to the 1874 average. The shrinkage in values has been the inevitable result of a return to a sound basis, and with gold steady at a fraction of oné per cent. premium we can scarcely expect wages to average, under any conditions, the rates paid when gold was jumping about from 110 to 113.

3. An advance in the price of labor would either cause a corresponding advance in the price of pig iron, or it would cause a stoppage of furnace operations until the stock of pig and old rails now on the market was consumed or so reduced as to create a demand for new iron at the prices which it would then cost. Probably the first effect would be the blowing out of a majority of the furnaces now running. Until the consumptive demand for pig iron should considerably increase, no such advance in price could be expected as would enable a majority of our blast furnaces to make iron with labor at mines and about stacks demanding the wages paid in 1874. If enough furnaces blew out and remained out of blast for a time, the price of iron would certainly advance to an average of the selling prices of 1874, which ranged for No. 1 iron from \$35 @ \$36 in January to \$25 @ \$27 in December.

The point of our correspondent's letter seems to be his inquiry as to whether the furnaces which could not make iron in 1874 and 1875 without loss, would be any obstacle to an advance in price to the average of those years. Until an unsuccessful furnace is abandoned it is always an obstacle to recovery in the iron business. There is no telling when it will be blown in or how long it will run, and if the financial condition of its owners is desperate, they are apt to sell at any price they can obtain to dispose of their product, We do not suppose that furnaces which had to blow out in 1874 and 1875 would be a permanent obstacle to profitable business for furnaces which could make iron at a profit at prices ranging from \$25 to \$35, with wages and materials as in 1874; but so long as their owners stand with match in hand, anxious to blow in on the barest chance of getting back the cost of their product, so long will the market be oversupplied and prices remain depressed. A good many furnaces of this class have passed into new hands since 1874 ments the value of patterns and flasks is at prices much below their cost, and the present owners would not be deterred from put-

men seldom learn wisdom from precept or example, and not always from experience.

Speculations of this kind, as to what might cannot exist, may be interesting, but they certainly are not profitable. The facts with which we have to deal, and the conditions to which we must look forward in the near future, are very different from those supposed by our correspondent. The years 1860 and 1861 are a much safer basis of calculation, so far as the immediate future is concerned, than 1874 and 1875. In those years the cost of pig iron per ton under the conditions named in our table for 1874 was as fol-

Ore															1860. \$5.75	1861. 85.44
Coal							 	٥	0	۰					3.70	3, 36
Limestone.												0	۰		-93	.96
Labor						0		 		٠		4		6 1	2,22	1.61
Contingenc	ie	5.						 			0	0 1			1.65	1.93
Interest on																1.05
Total						0									\$15.30	\$14.35

In those years prices of No. 1 iron ranged from \$20 to \$25 per ton in New York, and if an equally good margin of profit could be made now we think there would be very little complaint among ironmasters. cannot be expected, however, for some time to come. Our furnace capacity is greatly in excess of the requirements of the coun try, old rails are being used to an enormous extent in place of muck bars, and competition among pig iron makers is very sharp. The evils from which the trade now suffers will probably work out their own cure in time, but an advance of miners and ironworkers' wages to the 1874 basis would be a remedy much more likely to kill than to be but temporary, as values must necessarily decline again and wages with them. We ing and selling stoves. For the moment, howare many steps nearer a sound and permanent basis than we were in 1874, for which, his trouble is stopped at every turn by the at least, let us be thankful.

The Situation in the Stove Business.

From a somewhat careful inquiry among the stove manufacturers, we find that there is not much difference of opinion in regard the pressure of hard times the least. There to the immediate future of the trade. A good demand is expected this fall, but prices are so low and competition so close that few manufacturers see their way to make to die. Their competition is a serious even a narrow margin of profit. We do not matter in the aggregate. On the other know that prices are lower than they have been for some months past; but while it does not appear that any change which may occur will be for the better, it is quite certain that any change for the worse will be attended with widespread disaster.

From all we can learn of prices now charged for stoves, we do not hesitate to say that they average considerably be'ow the net cost of production. Some of the figures given us in confidence during the past month are simply amazing. They are not only below cost, but stoves could not be made for the money even with the cheap convict labor of which we have heard so much of late. As the rule, those whose prices are lowest in pro-portion to the character of the goods they sell, are not those who are so situated as to manufacture with the greatest economy. But if stoves are cheap, credits are still cheaper. We have seen letters offering first-class goods to dealers at prices below cost to the makers, with terms of credit as follows: Payment January 1, 1879, for amount sold up to that date, and balance January 1, 1880.

No security was demanded. Giving our stove manufacturers credit for ordinary business sagacity, we can only account for the eagerness with which many of them are selling at a loss on the supposition that they do not know what their goods are costing them. Indeed we feel justified in affirming that such is the fact. We scarcely know of any business in which a given expenditure of capital leaves so little at the end of a year to carry on the books as valuable The heavy expenses for patterns and flasks which are now necessary each over. nickel-plating plant or a stock of pig iron capital, but old patterns and flasks are worth so little that the sooner their cost is charged to the expense account the sooner a manufacturer will be in a position to correctly de termine the cost of his product. This makes a bad showing on the books, it must be confessed, but to make a favorable balance sheet by crediting this old lumber with a value it does not possess, is an expedient not unlike that of the Scotch bookkeeper who swelled the total of his employer's profits by writing the year at the head of the column and adding the figures in with the pounds sterling. The only trouble with this system of accounts is that it is apt to be misleading. Otherwise it is very satisfactory.

The test of a trial balance is a careful estimate of the value of stock and fixtures at forced sale. Its value to the manufac turer for purposes of carrying on his business is unquestionably greater than its value in the market; but in making his inventory he should carefully avoid overestimating its worth, especially in the case of patterns and whatever pertains thereto. In the bestmanaged establishments we know of, the inventory valuation of patterns, flasks, &c., is a constant figure, it the annual expenses for new patterns is fairly offset by the annual depreciation in in consequence of great improvements in the value of old ones. In other establish- the process of manufacture of tin plates as assumed to be what they have cost, and the cline like the one here noted could hardly sum expended each year is added to their have taken place if consumption had con- treaty. There is no objection to giving

actual state of his business can easily do so; stands, he would do well to inventory his plant and stock, not at its cost, but at its determine it. When our stove manufacturers generally adopt this sensible course they will have no trouble in discovering that the cost of their product is made up of sundry very important items besides iron, wages and foundry rent. That many do, is true but it is also true that many do not, and in desperate straits by selling stoves for prices ranging from 3 to 31/2 cents per pound, with liberal accommodation to buyers, they either overlook or disregard the fact that to do business at all they must make heavy annual inroads upon their capital.

In view of all the circumstances of the case it is difficult, if not impossible, to suggest a practicable remedy for the evils which now exist in the stove trade. economize in the pattern account seems to be impossible for houses attempting to do a general business. To abandon the countless ources of expense which add nothing to the utility and little to the beauty of stoves, would revolutionize the business. To advance prices in the face of such a competition as now exists would be impossible, and this cure unless all values could be advanced competition will continue until manufac-in proportion, and even then the relief would turers have much clearer ideas than most of them now have as to the actual cost of makever, the manufacturer seeking a way out of warning cry of "check" or "checkmate," and his only hope seems to be in his ability to hold out longer than a majority of his competitors. But such hopes are based upon vague uncertainties. Those we expect to see drop out first often hold on the longest and seem to feel are any number of small foundries through the country which are working along in a quiet way and which manifest no disposition hand, we have great and ambitious house with large resources of capital pushing out in all directions and maintaining a vigorous canvass of the whole country From time to time a manufacturer occupying an intermediate position between these extremes succumbs to the pressure of the times; but even in this class of misfortunes the confident predictions of last year have not been realized, and the percentage of failures in the stove trade has been sur-prisingly small. We hope this will continue to be true, but present appearances seem to give grounds for much anxiety.

Tin Plates.

The condition of the tin-plate markets of Europe and America is still most unsatisfac-Welsh manufacturers seem detertory. mined to continue a production largely in excess of the world's requirements. Agreements to curtail production for a while have been made on several occasions during the past few years, but the results have in-variably disappointed those who entered upon them in good faith, for there have always been some makers who quickly disregarded the compact, and the relief has been but temporary. During the spring of the present year such an agreement was acceded to by the majority of manufacturers, and stringent measures were taken to enforce the combination by means of penalties, but finally the attempt to limit the make was abandoned. There was a scarcity for a time of one kind of plates while another was abundant, but the general course of year, represent very little when the season is prices remained downward, the more so as A new cupola, new machines, a the demand on this side did not come up to expectations.

The following statistics will show the normous decline in the prices of plates during the past four years :

PRICE OF TIN PLATES AT NEW YORK

PRICE OF TIN PLATES AT NEW YORK.

Ordinary brands, per box, gold.

July 1, 1874. April 28, 1876.

Charcoal Bright. \$10.25 to \$10.50 \$7.00 to \$7.37½

Ternes. 9.00 to 9.50 5.75 to 7.00

Coke Tin. 800 8 8.25 6.12½ to 6.37½

Ternes. 7.00 to 7.75 5.37½ to 5.50 \$8.71 \$6.58 May 5, 1877. \$6.62½ to \$6.75 5.87½ to 6.00 5.75 to 5.87½ 5.37½ to 5.50 Sept. 7, 1877 Charcoal Bright. "Ternes. oke Tin. \$5.97 \$6.00 Average Average. 1878\$5.97 Feb. 28.\$5.85 March 31. April 30.

In June the average price fell to \$5.35, in July to \$5.33, and is now \$5.27. This is a de cline in four years of nearly 40 per cent. which is the more remarkable as almost the entire supply comes from one locality in Europe, from which the whole world must draw its supplies. Notwithstanding the efforts that have been made to keep up prices a decline being assumed that was inevitable, in sympathy with the depreciation of the raw material and labor, and well as in machinery employed. But a de interests by his position as precident of the ting them in blast by the financial disasters valuation on the books. We know of one tinued to increase in the same ratio as pre-

company which last year paid a dividend on vious to 1874. American consumption has profits apparently earned by such a loose been as large as could have been expected, system of bookkeeping, whereas, if the truth but this cannot be said of other countries, vere known, they had actually lost more especially the East, where insurrections and happen under conditions which do not and than their dividend represented, and its pay- wars have hampered trade while frightenment was simply a disbursement of capital ing Western Europe into inactivity. Before needed in the business. The manufacturer long a favorable change may be expected, who wishes to deceive himself as to the but predictions of renewed activity in tin plates would be dangerous at this time. The but if he wants to know exactly where he past month has abundantly proved that a revival in trade in Europe will be slow in any event, and that in spite of the momen. actual value as an asset as nearly as he can tarily peaceful aspect, suspicion and caution have become business habits to such an extent that nothing but a healthy expansion of the demand will strengthen the market for tin plates. Speculation may be attempted, such ventures would be hazardous. but

With regard to the immediate future of tin plates in this market we can only speak trying to tide themselves over their present in general terms. The shipments this way were lighter during the first 6 months of 1878, having been 955,622 boxes, against 1,000, 412 during the corresponding period of 1877 and 774,275 in 1876, or 52,715 tons, against 53,590 and 43,005; still the supply has been ample. Since the beginning of the year there has been but little demand from the interior. The Western jobbers seem to be resolved not to anticipate the requirements of the trade, and as they have been buying from hand to mouth only during some eight months past, they are supposed not to hold a large stock collectivelylarge dealers may do so individually. The cereal, fruit and hog crops being abund. ant and prices low, and petroleum also selling at a ruinous figure, while the export of all these goods is large, unusually so in some cases considering the season, an extensive consumption of tin plates for canning purposes must be going on, and will remain on the increase as we approach the fall and winter months. Tin plates, by reason of their extraordinary cheapness, are now being used for many purposes, by grocers and others, for which they would have been too dear at the prices of four years ago. This steady and ever-increasing consumption for preserving, &c., and for petroleum packing, cannot fail to produce its effect, not to speak of the many other needs for which tin plates are now largely used. We believe it safe to assume, therefore, that the present and future consumption of tin plates will warrant a continuation of the present rate of importation, but to increase the latter beyond what it was last year might entail disappoint. nent and loss.

In accordance with an order issued last

Saturday to the various foremen of the force engaged upon the New York and Brooklyn Bridge, work on the structure was wholly suspended Monday morning. Mr. Henry C. Murphy, President of the Board of Trustees, stated that there was a small balance in hand at the expiration of last month, and, hoping that the appropriations asked for from the cities of New York and Brooklyn would come in, the trustees concluded to continue the work. Such appropriations not having been paid in, however, and some legal complications having arisen, it was thought best to suspend the moment the funds gave out, and the work will not be resumed until the matter is settled. Mr. Murphy, in response to the question whether the Controller of the City of New York would probably issue the bonds required for the purpose, said that Corporation Council Whitney had given an opinion in the matter favorable to the cause of the Bridge Trustees, but he had no means of knowing whether Controller Kelly would comply with the provisions of the law. Should he decline to issue the bonds, it would remain for the trustees to appeal to the courts for such a decision of the questions in con-troversy as shall be mandatory. The letter of Corporation Counsel Whitney, after reviewing all the points in the arguments of the representatives of the committee of New York citizens opposed to further expenditures on account of the bridge, concludes as follows: "I am, therefore, of the opinion that your honorable board is without jurisdiction in the matter; that under the law of 1875, and the ordinance of May 8, 1876, the right of the Bridge Trustees to receive the money called for is perfect, and that without further action it is the duty of the Controller to issue the bonds and pay the money to the amount of the requisitions of the trustees, to the extent of \$2,666,666.66, under the act of 1875." We presume the opposition will push for a hearing before the courts, in which they will seek to restrain the Controller from issuing any more bonds for this purpose by permanent injunction.

If the gentlemen who are engaged in pushing the proposed treaty of commercial reciprocity between this country and France upon the attention of the two governments really expect to succeed in securing its favorable consideration here, we fear they will be sadly disappointed. The draft of the treaty made by the International Congress at Paris proposes that the French government shall engage to admit all American productions at the same rates as are imposed on the productions of the most favored nations, and that the United States shall make the same engagement regarding the productions of France; and that if either nation imposes a domestic duty upon its own productions, the same duty may be imposed upon the productions of the other party to the France as good a chance to compete in our

markets as is offered to any other nation, but it is scarcely to be expected that we shall change our tariff system to conform to hers, as this congress proposes. That such a concession would give us any advantage we do not now possess in the French markets, is scarcely to be expected. One nation takes only what it wants of the products of another, and French consumers would not want any more American manufactures after such a treaty went into operation than they do now. French exports to this country are largely of a class which will bear taxation with least burden to consumers, and until there is a better opportunity than now exists for an increased exportation to France, our government will not be likely to feel any anxiety to reduce the duties on imports from France, chiefly for the accommodation of French manufacturers of wines, chocolate and fancy goods.

The economists who are looking for the causes of our present unsatisfactory national condition, seem generally to lose sight of the fact that nearly all the world is in as great trouble as we are. In France there are indications of a wholesome development of practical common sense in business, which seems to have grown out of a forced economy of expenditures and a shrinkage of values. There is much less show and more inquiry among representatives of the upper classes for profitable employment. Austria is still suffering from the panic which culminated during the exhibition : Germany has suffered severely from the general depression, and her industries are far from prosperous; Spain is impoverished by the loss of Cuban revenues; Turkey is hopelessly bankrupt; Egypt is seeking to borrow, with no one anxious to lend; in Great Britain failures are shaking the foundations of the commercial and industrial system, labor is but partially employed and every interest suffers; in China multitudes are dving of starvation and the government is powerless to relieve their needs; from timely interest for American ironmasters. India, Brazil, Peru, Chili-in fact from everywhere comes reports of depression and shrinkage of values with all their attendant evils. Who can tell when the causes which have produced these results began to operate or what influences contributed directly or indirectly to bring them about? Probably the world's wars have done more than any thing else to sow the seeds from which grew the harvest of evils we are reaping to-day. Could we but be sure of a century of universal peace, we could count with certainty upon a century of greater and more general prosperity than the world has ever seen.

A committee of the Manchester (England) carpenters who had charge of the affairs of trade during the long strike which lasted a year and one week, have made a final report. The committee admit that the strike has been a failure so far as present gain is concerned, and they say, also, that the problem whether it is possible to raise or reduce wages on the basis of employers' profits remains yet to be settled. The masters not only held out against their demands, but against an offer to submit the question to a committee who should examine their books and ascertain whether the profits would warrant the payment of the wages asked. In this refusal they were perfectly right. Experience has shown that a scale of wages based upon employers' profits is not and cannot be a satisfactory basis of agreement between masters and men. When profits are increasing and wages advancing the men are satisfied; when profits shrink and wages decline they become discontented and take the first opportunity to break their compact. Again, the details of an employer's business are matters with which the workman has no concern. He has no capital invested except what he can take out whenever he chooses and as long as he works he receives wages whether his employers are making money or losing it. To sustain their strike cost the Manchester carpenters \$225,000, and in addition to this sum they expended \$40,000 more received from other trades. It does not appear from the report that they gained anything, which is not to be wondered at.

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We have been at some pains during the past week to ascertain the exact status of the Madeira and Mamore Railway enterprise, which has lately been a subject of no little public interest. Mr. Joseph S. Mackie, vice-president of the road, pronounces unjust and untrue much that has lately been printed respecting the condition of the work and the treatment of laborers employed upon it. The first detachment of workmen left the United States about January 1st, and up to the date of latest mail advices (June 1st), out of between 800 and 900 men. an average of not more than seven or eight per day had been sent to the hospital and not one had died. The health of the men was as good as could have been expected anywhere among an equal number of men and under circumstances in which more or less privation is inevitable. It is true that there was a temporary shortness of supplies resulting from the detention of a vessel through some misunderstanding, but this was soon remedied; and as to the payment of wages, a large proportion of the men made an assignment for the benefit of their families before starting, on which checks were promptly given in New York and Philadelphia by the agents of Mr. Collins, the

president says that vessels are constantly taking out supplies and materials. Since December 20th eight steamers or sailing vessels have departed with locomotives, rails, fish-plates, &c. Four surveying parties are now on the field, and by this time must have gone over a considerable portion of the route, comprising some 180 miles, of which it is probable six miles are already

Keith's process for the desilverization of base bullion, which is fully described elsewhere in this issue, has not yet passed beyond the experimental stage, but it gives promise of great value for those engaged in the utilization of argentiferous lead ores, which are found in great abundance in many parts of the West. It is the first process ever proposed for directly separating, without the aid of fire, an alloy of silver and lead in which the former is present in a small percentage only. Mr. Keith, who occupies an acknowledged position as an authority on electro-metallurgy, has by the application of electrical force to the metallurgical treatment of metals, opened, it would seem, a new field in metallurgy which promises a rich harvest. The new method is remarkable for its simplicity and the absence of any causes which might entail losses of metal.

On another page Mr. Fairchild, our Consul at Liverpool, gives an interesting account of the condition of mechanics and aborers in that city. The figures of wages, hours of labor, rents, cost of living, &c., will he of interest to those fond of making comparisons between this and other countries.

Mr. Rudy's analyses of Illinois coals, given in another column, are of double interest, showing not only the composition of the coals, but the effect of coking in removing sulphur.

A paper elsewhere printed in this issue on the use of cinder in the blast furnace, is of

The Death of Thomas Whitwell.

SOUTH PITTSBURG, Tenn., Aug. 7, 1878. To the Editor of The Iron Age.—DEAR SIR: It is with feelings of the deepest sorrow I communicate to you the intelligence of the intimely death of our president, Mr. Thmoas Whitwell, of Stockton-on-Tees. The news was received yesterday by cable from Eng-land, and appears to be the result of some accident by which he was severely scalded.

Mr. Whitwell was born at Kendal and educated at the Quaker's school in York. He served his apprenticeship as an engineer in the world-renowned works of Robt Stephenson & Co., Newcastle-on-Tyne. 1862, being at that time about 24 years of age, he established himself at Stockton-on-Tees in company with his older brother William, and there established three blast furnaces. They had a very successful run, being only blown out in 1875 or '6. As the furnaces were out in 1875 or o. As the lurnaces were by this time too small to compete with more modern plant, Messrs. Whitwell erected three other furnaces of very large dimen-sions. They also had an extensive rolling mill attached, for the manufacture of light rails, rods, &c. They used a higher quality of ores than was customary in the Cleveland district, and always sold their iron at a special price. Mr. Thomas Whitwell is best known in the iron trade as the patentee of the hot-blast fire-brick stove, which, after a hard struggle to overcome prejudice, has been finally adopted at a very large number of furnaces, and is regarded as the leading hot-blast stove in the trade. He also introduced a useful and fuel-saving domestic hot-air fire-place. Mr. Whitwell was deeply air fire-place. Mr. Whitwell was deeply impressed with the great future of the American iron trade. He visited this country in 1874 and in 1876, and to his strong belief in the richness of the country must be attrib-uted the prominent part he took in the forformation until the day of his death. Another national feature which took great hold of him was the development of fire brigades is in the large cities. Mr. Whitwell was a man of splendid physique, and organized a fort of the workpeople in his employment, and by his hearty co-operation, as well as generous donations of prizes toward swim-ming contests, and the formation of rowing clubs, gymnasia bands, &c., he found much useful and innocent recreation for those about him. He was a very devout Christian, being an acceptable minister of the Gospel in the Society of Friends. He was also the secretary of the Y. M. C. A. for the northern counties of England, and by his own exertions increased the number of their associaons from 2 to about 25 within 10 years. He was also president of the Cleveland Institute of Engineers. His loss will be very severely felt throughout the Northeast of I remain, yours truly,
Jas. Bownon.

The Radicals of Southwark, England, propose to nominate Miss Helen Taylor for Par-iament at the next general election, and thus practically raise the question of woman's ghts. Miss Taylor is a member of the ondon School Board and a niece of the late rights John Stuart Mill.

Two steamships for the New York and Savannah Steamship line are building at Chester, and are named the Gate City and the City of Columbia. Each will have capacity for 4000 bales of cotton, and they will cost about \$260,000 apiece.

The Nevada Bank of San Francisco has adelphia by the agents of Mr. Collins, the contractor. Any privations endured have been shared by officers and men alike. As the progress of the work, the vice-dard dollars.

Metallurgical Notes.

THE PLUM "SPREADER" TUYERE

In the first volume of the Journal of the Iron and Steel Institute for this year an appendix is added, in which a description given of a new open spray tuyere invented by T. W. Plum. This tuyere, it is claimed, suffers less from obstructions and can be more readily cleared from impediments than the open spray tuyeres, with which it fully shares, however, the advantages of freedom from danger of explosions. It is made with the ordinary form of water jack-et, except that the outer or larger end is only partially closed, the lower half being closed by a fixed half-ring, while the upper closed by a fixed half-ring, while the upper half has a removable piece. The supply pipe is so constructed that it delivers its water over a sheet-metal "spreader," which keeps the upper half of the tuyere con-stantly cooled. From the end of the spreader a fan-shaped jet of water is delivered against the nose end of the tuyere, and a stream pours down each side of the outer shell, thence flowing through the cutter him. At thence flowing through the outlet pipe. At the Lilleshall furnaces this tuyere was found to be successful in economizing water. With 23 per cent. less water it left the spreader tuyere 12 degrees colder than from an ordinary close tuyere by the side of it.

A NEW ROCKING PUDDLING FURNACE.

In a paper read before the Liverpool Polytechnic Society, Mr. Thomas Gedlow described a new puddling furnace which differs from the ordinary reverberating type in the manner in which it is mounted on an axis and left free to oscillate or rock. In order to keep open a communication with the furnace and chimney the neck is curved. During the melting of the pig the furnace is inclined so that the flame strikes the metal directly. As soon as it is fluid a slow, oscillating motion is imparted to the furnace, six to eight oscillations being sufficient to give the melted iron an undulating motion, which it is claimed materially lessens the labor of the puddler, improves the quality of the product, increases the production and dimin-ishes the cost. The maximum inclination from a horizontal position is 30 degrees. a small experimental furnace eight heats yielding 50 cwt. could be made in 24 hours, whereas an ordinary furnace would in the same time give only 25 cwt.

FREW'S CLOSE TOP FOR GAS FURNACES

Frew's close top, as described and illustrated in the Engineer, is a modification of the ordinary cup and cone apparatus. The basin is covered by four hinged doors, which are so connected by chains with the beam for lowering or lifting the cone that as soon as the latter is lowered to drop a charge into the furnace the doors close. By this means the serious effects of escaping gas upon the workmen are completely avoided.

A LARGE IRON WORKS IN SWEDEN. The latest, and probably the largest, iron works of Sweden are those at Donmarfoet, on the Dal Elf, the principal river of Sweden. The establishment comprises a large sawmill on the right bank of the river, the slabs from the logs being carbonized and the sawdust used in the gas reheating furnaces.
The iron works on the left bank form a
T-shaped block of buildings entirely roofed
in. The cross-arm, 330 feet by 220 feet,
contains the forge and steel works, the blast furnace and kilns being in the stem, a buildrurance and kins being in the stein, a building about 240 feet square. The calcining kilns are placed at the highest level upon pedestals of masonry, the blast furnaces being a little lower. Provision has been made for three, but only one has as yet been built. This is of the usual Swedish type, with nearly cylindrical sides and steep boshes, the hearth being stamped in of clay and quartz mass, and the throat enlarged for the insertion of an iron tube, which isolates the gas-collecting space, the furnace being worked with an open top. Unlike most Swedish furnaces, however, it is of thin fire-Swedish furnaces, nowever, it is of thin irrebrick construction and completely iron jacketed. The Bessemer converters—only one as yet being erected—are placed below the tapping level of the furnace so that the metal may be run in direct. They are of the usual tipping pattern, the fixed or Swedish pattern proper having been entirely mation and development of the Southern Swedish pattern proper having been entirely States Coal, Iron and Land Co., London, of which he was chairman from the day of its power is derived router, which gives an unlimited volume of water, but at a comparatively low head, which is subject to a variation of 15 feet between low and flood water level. The driving water is taken in by a syphon tunnel of oval section in the rock about 45 foot below the surface, adouth that was man of splendid physique, and organized tunnel of oval section in the rock about 43 to volunteer fire brigade in Stockton, of which he was captain. He was ever foremost in rendered necessary by the great amount of rendered necessary by the detritus covering the rock in the valley. At intervals branch channels lead to the turbines, which are six in number; one of 400 horse-power, for the Bessemer blowing engines, one of 100 horse-power for the blast furnaces, two of 400 horse-power each for the rail and heavy plate train, and two of 200 horse-power each for the bar and nail rod and tire-rolling mills respectively. As these are intended to run continuously for long periods, and in a completely condition, a simple construction not requiring frequent examination was a necessity, and therefore the Whitelaw form of wheel, working by reaction and four discharging orifices, has been adopted. The reheating furnaces are of the Siemens pattern with Lundin gas producers; these have a large rectangular combustion chamber, the gas produced being washed in a condenser divided by parallel walls, each of which has an injection pipe and rose for the introduction of the water for condensing the second and tarry matters brought over. The old arrangement of filling the chamber with A large model of the plate rolling mill is placed below the drawings; it is of Lauth's construction, with three rolls, the center one smaller than the top and bottom ones. The adjusting gear is arranged for movement by hand or by gear from the

STEEL MAKING AT VIKMANSHYTTAN

water wheel.

At Vikmanshyttan steel is made by Uchatius's process of melting granulated pig iron together with finely pulverized magnetic iron ore and a little charcoal in blacklead crucibles. The product is specially fitted for making dies, punches, mallets for At Vikmanshyttan steel is made

boring, and similar objects where great strength and hardness are required. Some mallets that have been at work for several months, boring in hard iron ore, are shown in support of this property.

EARLY EXPERIMENTS WITH MECHANICAL PUDDLING IN SWEDEN.

Prof. S. Jordan, of the Ecole Centrale of Paris, sends us a reprint of an interesting article lately contributed to the Revue Universelle des Mines, in which he gives a trans lation of a description by Grill, in the Jern Kontorets Annaler for 1859, of a rotary pud-dling furnace. The furnace referred to, the Oestlund, has some striking points of resemblance to the modern Godfrey-Howson. Like the latter it has a rotating pot, although the capacity is very much smaller, and the blow-pipe action of a jet of gas mixing with heated air is common to both. The Oest-lund apparatus did not, however, meet with much encouragement at the hands of Swedish ironmasters, and it seems that Grill, who did not consider it practical because in Sweden the forges were then not directly connected with blast furnaces, turned his attention in 1862 to trials made under the direction of Gustav Ekman at Finspong, with a puddling furnace, some features of which are similar to those of Danks and sellers. The furnace was worked with ceated blast and with gas as fuel, but was, Sellers. it seems, abandoned also, as Grill only mentions in 1863, in the *Jern Kontorets Annaler*, that the trials were continued, but gives no further details.

GOOD WORK OF A GERMAN BLAST FURNACE. The late Mr. Thomas Whitwell, in a paper on the construction, dimensions and manage ment of blast furnaces, read before the Cleveland Institution of Engineers, gives the following as the work of a small furnace at Steele, Westphalia, Prussia, which is not exceeded with high modern furnaces in the Cleveland district. The furnace, though smelting ores district. The furnace, though smelting ores holding 41 per cent. of iron, and being only 48.6 feet high, did not use more than 18½ cwt. of good coke, or 24 cwt. of inferior coke per ton of pig. The burden producing 1000 lbs. of pig iron, was 2440 lbs. of ore, 765 lbs. of limestone, and 925 lbs. of best or 1200 lbs. of ordinary coke, the dimensions of the furnace being: Diameter at tunnel head, 10 feet; at bosh, 15 feet; of hearth, 6 feet. The six tuyeres, each 3½ inches in of feet. The six tuyeres, each 3½ inches in diameter, had a surface of 57.72 square inches. The angle of bosh was 61 degrees. The amount of iron made in 1864 was 12,030 tons, or 231 tons per week.

SILVER ORES FOUND IN SOUTH VIRGINIA.

From a letter from C. R. Boyd, of Vythe-From a letter from C. R. Boyd, of Vytheville, Va., we take the following facts of a silver discovery in the South: A series of veins pass through Carroll county, Va., and Allegheny county, N. C., which were hitherto supposed to be mere copper lodes, until a series of analyses, made by Prof. W. K. Dean, of Vincennes, Ind., revealed their transmitter. The discf the reine is available. true nature. The dip of the veins is variable being at some points only 45 degrees, while at others it is almost perpendicular. As the general character of the country is hilly, locations might be found for working by adits. Thus the elevation of a point on the lode 1½ miles from New River is 550 feet, and at this point ore was found an analysis of which yielded :

Copper.																						
Iron																						
Sulphur	٠.																	,				10,000
Nickel																						5.224
Nickel Silver																						2,000
Arsenic		 			۰		ě								۰	0		0				24.771

The value of this ore per ton would be taking silver at \$1.14 per ounce, \$660. An average of 50 samples taken from the same

place,	0)]	τ	I	1	8		Ŋ	M	91	5	D	Į(Э	0	К	Q	1	l.	8	,	•	24	,	P	Ì	31	9	ľ		•	H	1	ts	15	9	1	gav
Copper	٠.				٠		۰							٠	٠	a					٠																	38.0
Iron													۰																									47.0
Nickel.																																						
Silver.																																						
Sulphu	r	. ,															. ,											0	,	0								12.0
Cobalt.																																						
																														-								

The percentage of silver would correspond in this case to \$50. Specimens taken from a shaft 30 miles distant from the first place in the same series of veins gave the following:

owing	:																													
opper.					,				,					,						,		,								31.000
ron			٠	۰						,																	0			40.228
Sulphur													۰						0	0				0						11.000
lickel																۰			*	×	×									2,000
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of the quality given by the second analysis would become the basis of a large and profit second analysis. able mining enterprise. We should add that the Virginia deposit is distant from the line of the Atlantic, Mississippi and Ohio Railroad 23 miles, and is accessible by common country roads.

A FRENCH GAS HEATING FURNACE.

Mr. Brustlein gives the following description of a gas heating furnace used at the Unieux Steel Works, the object of which is to heat bars or pieces of steel of a certain length previous to tempering, which calls for great uniformity of temperature. furnace is an adaptation on a large scale of the Schloesing blow-pipe apparatus used in laboratories. A series of these are placed along the entire length of the furnace blast is carried into it by a tin-plate pipe placed above the tuyeres, and small tubes distribute it to each one, the blast pipe being carried to the center of the gas pipe. The mixture thus made enters the furnace through a cast-iron pipe, and is obliged to bend before it can escape upward to-the piece to be heated. The gases are ward the piece to be heated. carried to the generators by cast-iron pipes, and each of its branches is fitted with a valve to regulate the flow of the gaseous fuel. The distance of two tuyeres from center to center is almost one foot. The entire length of the furnace is 10 feet. As each of the gas jets may be regulated at will, the temperature of

Ericsson's Torpedo.

'In September this singular craft will be finished and subjected to various tests as to the power of her engines and her adaptation to the torpedo service. Capt. Ericsson was found by an Iron Age representative at his residence in Beach street, and had evidently been disturbed while at his draw-ing board in a retired part of the building. With regard to the torpedo he ventured no predictions, but was emphatic in that the machine as a device for fighting ironclads would be impregnable. Moved by an engine of great power it would have a velocity surpassing that of any antagonist, and being almost wholly submerged and in perfect control could advance boldly in the face of the enemy and deliver her missile with destructive effect. Capt. Ericsson then spoke of the superiority of his torpedo com pared with the Whitehead pattern, which could not be guided with any certainty, and the Lay, which was too much exposed above the surface of the water. He could use either steam or compressed air as a motive power. Although the distinguished inventor declines to speak more in detail at present, it is understood that while his boat does not exceed 120 feet it will have a pair of 24 inch cylinders, and, judging from former experiments on the Hudson, will be able to propel a torpedo horizontally under water with great velocity, or if desired the missile can be given an upward direction, so as to pierce a ship's bottom below the iron

Capt. Ericsson is about seventy-five years of age, but appears to be twenty years younger, full of energy and enthusiasm. His great work is the solar engine, as indicated by the half-score of models and instruments of mysterious construction, all of highly finished brass, which fill his parlors. One which he points out with special satisfaction has the power of determining the heating power of any portion of the sun's disk. He will soon push his investigations with proposed scale. tions with renewed zeal.

More Steamers for the Mediterranean Fruit trade,—We learn that the owners of the steamship Powhatan, of which Phelps Bros. & Co. of New York are agents, have bros. & Co. of New York are agents, have received such encouragement in their attempt to establish a line of steamers between this port and the Mediterranean that they have contracted with the English builders for the construction of a second steamer of a slightly larger carrying capacity, and expect soon to order a third. Phelps Bros. & Co. being large owners, make this really, so far as management and capital are concerned, an American line. Their cerned, an American line. Their first steamer cost £30,000, or £150,000, and it is said on good authority that she cleared a net profit of 8 per cent. on the first round voyage, more exactly stated, about £2400. This was last spring, and she is now on her third voyage. She loads in New York with third voyage. She loads in New York with a full cargo for England or the north of Europe, and sails thence with coal, to discharge at Gibraltar and Alexandria, and returns with oranges, lemons, raisins &c., via Sicily and Valencia, making each time what is called a triangular voyage. Up to five years ago there were probably 300 car-goes of fruit arriving by sail in New York from the Mediterranean, whereas now the number per annum cannot exceed 50 or 75, sailing vessels being almost wholly super-seded. The Anchor Line and Phelps Bros. run a steamer every ten days. Then there is the Fruit Merchants' Association, which dispatches two steamers a month. The average cargo of a steamer in the busy season is 20,000 boxes. The season may be said to open Jan. 1st, though shipments of oranges and lemons commence in November and continue until the middle of July. Com-plaint is made that for a number of months past prices have been so low as to yield scarcely any remuneration. Respecting the new Boston steam line to the Azores, New York merchants see no possibility of its maintenance, except by running through to Lisbon. A leading New York house would gladly run direct from New York to the Mediterranean via the Azores if there was the least encouragement, but are compelled instead to go out via England for coal.

Failure of a Copper Ore Mining Comyielding in silver \$332.50. These figures do not, of course, represent the average value of the vein, which in the first case is 8 feet, and in the second is 6 feet wide. While the analyses bear the character of approximations only, which is to be deplored, especially in the case of silver, they prove the existence of an ore which, if discovered in large quantities and of the capility given by the second analysis. pany.—The Union Consolidated Mining Co. supplies, &c. It will be remembered that this company was sued two or three years ago by its manager, Mr. J. E. Raht, for \$125,000 advanced by him. The company entered a cross suit against Mr. Raht for over a million, alleging that their superintendent had de frauded them out of that sum and run mines at a loss for his private benefit. suit was decided and judgement rendered for Mr. Raht. It now appears by their failure that the new management of the company have been less successful than Mr. Raht in running the mines of a Novik Theorem. Raht in running the mines at a profit. probable stoppage of the mines will diminish the annual production of copper by about 1,500,000 lbs. It is not likely that the works and mines will again be started until a railroad is built to connect them with the Chattanooga coal field.

> Flour, lard, tea, cotton cloth, oil, beads, Flour, lard, tea, cotton cloth, oil, beads, wheel barrows, sewing machines, agricul-tural implements, paper, axes, clocks, fish, drugs, organs, pianos and pork are among the articles shipped to Brazil on the City of Para, from New York. Fourteen thousand barrels of flour in a single cargo, besides all the articles we have named, and a host of others suggests the possible trade which awaits enterprising American merchants.

> At Hereford, England, a fortnight ago tank of 2000 gallons of creosote burst and emptied its contents into the river Wye, kill-

AMERICAN SCREW CO.,

Providence, R. I.,

MANUFACTURERS OF MORE THAN 4000 VARIETIES OF PRODUCT,

AND INCREASING THE ASSORTMENT DAILY.

Machinery employed contains important inventions recently patented, and which are designed to produce Screws at a lower cost to the consumer than has ever been attained.

All goods are distributed through the Hardware trade, to whom a liberal discount will be allowed.

(No. 235.)

INTERNATIONAL EXHIBITION.

PHILADELPHIA, 1876.

The United States Centennial Commission has examined the report of the Judges, and accepted the following reasons, and decreed an award in conformity therewith.

PHILADELPHIA, November 8, 1876.

Product: Iron, Brass and Steel Screws, Tire and Stove Bolts, Rivets.

Name and address of Exhibitor: American Screw Company, Providence, R. I.

The undersigned having examined the product herein described, respectfully recommends the same to the United States Centennial Commission for Award, for the following reasons, viz:

Being of a quality nearly approaching perfection, showing the highest attainment in this branch of manufacture.

G. L. Reed. Signature of the Judge.

REPORT ON AWARDS.

ove Bolts, Rivets.

Approval of Group Judges,
Daniel Steinmetz,

dges.
Daniel Steinmetz,
Jas. Bain,
Chas. Staples

G. L. Reed,
J. Diffenbach,
Dav. McHardy.
Chas. Staples

Chas. Staples,
A true copy of the record. Francis A. Walker, Chief of the Bureau of Awards.
Given by authority of the United States Centennial Commission.
A. T. Goshorn, Director-General.







J. R. HAWLEY, President.

After forty years' experience we offer to the trade our Centennial Screws, patented May 30, 1876, as the best we have ever known.

The method of manufacturing is also patented and we are changing our machinery as fast as possible, to manufacture the improved article only. To introduce them, they will be sold at the same price as the old style screw.

The new screws will be packed in manila colored boxes with the new label covering end of box, and enlarged figures showing plainly contents.

To distinguish this screw we have adopted a trade-mark, which is also secured to us.

The accompanying engravings show the progress of making screw from the old blunt point to style now adopted.

Experience has shown that the weak point of screws, as formerly made, is at the heel of the thread, where all Section at Line C D

the strains of forcing the screw into the wood naturally concentrate.

To avoid the sharp angle existing in the old style of screws has been the aim of all manufacturers, but every expedient hitherto adopted has proved as objectionable as the evil complained of.

It will be seen in our new screw that not only is the sharp angle avoided, but the strength very much increased, as illustrated. See sections at lines.

CLAIM.

"A Pointed Wood Screw having the outer periphery of the thread upon its body cylindrical, while a portion of the body below the thread and near the neck is conical, the remainder of the body to the point being cylindrical, and yet having all the thread brought to an edge of a constant angle, without jogs in the paths between the threads, substantially as described."

On the opposite page will be found illustrations of the various Works of the company.

Section at Line E F

SPECIAL ANNOUNCEMENT TO THE HARDWARE TRADE,

THE

AMERICAN SCREW CO.

WILL MAKE A

PEREMPTORY SALE

OF

HALF A MILLION GROSS

Of their Best Quality

Patent Gimlet Pointed Flat Head Iron Wood Scre ws,

THROUGH

Messrs. BISSELL & WELLES, Auctioneers,

AT THEIR SALESROOM,

83 Chambers and 65 Reade Streets, - NEW YORK, On Wednesday, August 21, at 10 o'clock a. m.

The goods will be offered in lots to suit all classes of buyers, but assortments sold will be required to be in the usual proportion of sizes, unless otherwise agreed.

Parties unable to attend can make up their orders and forward to the auctioneers or their own correspondents to purchase for them.

All goods will be delivered F. O. B. at Providence, and through Bills of Lading obtained when desired.

Terms, cash in 30 days from date of sale for approved credit.

To parties who take less than a full case of a size, an extra charge of $2\frac{1}{2}$ per cent. will be made on the amount repacked.

Statistics of the Foreign Iron Trade in 1877.

BY JAMES M SWANK

(Continued.)

[Abstract from annual report to the Amerin Iron and Steel Association, published July 15, 1878.] BELGIUM

In M. Deby's last published statistical report as foreign secretary of the British Iron and Steel Institute, we find an official statement by the Belgian government of the iron and steel industries of the Kingdom of Beland steel industries of the Kingdom of Dergium in the year 1876, from which we compile the following summary, in metrical tons (2204 pounds): Whole number of ironworks, 314; pig iron produced, 571,267 tons; wrought iron produced, 416,714 tons; worzs, 314; pig iron produced, 416,714 tons; number of steel works, 3; steel produced, principally Bessemer, 75,258 tons. The production of pig iron in 1877 has been unofficially given as 425,200 tons. Liege made all the steel made in Belgium in 1877, but statistics are wanting. The production of pig iron in 1875 was 540,473 tons; in 1874, 532,790 tons; in 1873, 607,373 tons; in 1872, 655,565 tons. The production of wrought iron in 1875 was 436,440 tons; in 1874, 510,920 tons; in 1873, 480,374 tons; in 1874, 510,920 tons; in 1873, 480,374 tons; in 1872, 502,577 tons. The years 1872 and 1873 witnessed the greatest production of pig iron in Belgium, and the years 1872 and 1874 the greatest production of wrought iron. The year 1877 appears to have been especially unfortunate for the Belgian pig iron makers, the production in that year being

years.
The production of coal in Belgium in 1876 is officially returned at 14,329,578 tons. Of the coal thus produced in 1876 10,486,660 tons were extracted in the province of Hainaut, 474,975 tons in the province of Namur, and 3,367,943 tons in the province of Liége.
The production of coal in 1877 is supposed to have been somewhat less than in 1876. to have been somewhat less than in 1876. The production of 1875 was 15,011,311 tons, and that of 1874 was 14,407,082 tons. It appears, therefore, that the coal mining industry of Belgium has been practically stationary for the past four years. Of the coal raised annually in Belgium the great bulk is produced in the province of Hainaut.

makers, the production in that year being much less than in any of the five preceding

From an important paper on Belgian trade, recently prepared by Mr. J. Saville Lumley, attached to the British Legation at Brussels, we glean the following information:

"The Belgian government has recently decided on the substitution of steel rails for increase the State relivance and in Novame.

decided on the substitution of steel rails for iron on the State railways; and in November, 1876, the directors of the State railways decided to dispose of the old rails by turning them into continuous iron longitudinal sleepers. On the 5th of November, 1877, an arrêtê royal was published in the Belgian Moniteur, appointing a commission of 20 gentlemen, connected with the iron trade in various ways, to examine into and suggest means for extending the use of iron as a substitute for wood and other substances. Great things are expected in Belgium from suggest means for extending the use of iron as a substitute for wood and other substances. Great things are expected in Belgium from the report of this commission, which has at its head Mr. F. Jochams. Inspector General the report of this commission, which has at its head Mr. F. Jochams, Inspector-General of Mines for the kingdom, a man most fitted in every way for the post. The commission is at present sitting, but the report cannot be expected to be issued for some months." The following table shows, in metric tons, the course of Belgian iron, steel and coal im-ports and exports during the last three years:

		-		-
Imports.	Pig and ot'er ir'n.	Iron ore.	Coal & coke.	Steel.
1875	162,346	804,370	724.440	5,341
x876		671,134	832,296	6,137
1877	207,353	783,298	678,318	4,659
Exports.				
1875	222,096	141.767	4,709,747	7.318
1876		166,417	4,399,605	5,567
1877	213,715	225,658	4,060,722	15,527

In 1877 Belgium exported 201,688 metric tons of manufactured iron, and imported imported 193,380 tons of pig iron, and exported only 12,027 tons. Of iron ore there were imported 783,298 tons, 215,658 tons of which were re-exported. The grand duchy of Luxemburg supplied 573,600 tons.

The iron tool in 1876 was 205, against 224 in 1875 and 217 in 1874. In 1875 there were 101 furnaces on blast out of blast. Of 5887 persons employed in the Swedish iron mines in 1876, there were 421 women and girls.

which were re-exported. The grand duchy of Luxemburg supplied 573,600 tons.

The iron trade between Belgium and England during the last three years has been as follows: English pig imported by Belgium: 1875, 109,037 tons; 1876, 115,103 tons; 1877, 93,825 tons. Belgium iron shipped to England: 1875, 33,792 tons; 1876, 36,752 tons; 1877, 52,662 tons.

Prices of iron in Belgium in 1877 varied for merchant irons from £5, 4/ to £5, 8/:

for merchant irons from £5. 4/ to £5. 8/; for pig, from 50/ to 54/; for iron rails, from £5. 8/ to £. 12/: for shed rails, from for pig, from 50/ to 54/; for fron rails, from £6. 8/ to 5. 12/; for steel rails, from £6. 16/ in February to £6. 12/6 in July and £6. 15/ in September. In Luxemburg, foundry pig has been steady at £1. 17/6.

The prosperity of the Belgian iron industry was promoted during the Franco-Prussian war in 1870 and 1871, neither Germany nor France having leisure to prosecute

many nor France having leisure to prosecute with energy its own iron industry, and both Belgium and Great Britain reaping a rich harvest by supplying the iron necessities of both belligerents. Subsequently the pros-perity of the Belgian iron industry was continued through the payment to Germany of the large French indemnity, which stimu-lated all Continental industries, including that of iron. But of late the Belgian iron that of iron. But of late the Belgian iron industry, like that of other countries, has passed under a cloud, as is shown by our statistics, the result of a natural reaction from an unhealthy inflation. The ironmasters of the little kingdom are, however, remarkably tenacious of the position thay have already achieved as iron position they have already achieved as iron producers and remarkably aggressive in seeking foreign markets. They have, too, some advantages in the manufacture of cheap iron which are not possessed by other These advantages are thus summarized by Mr. Lumley in an inquiry into the causes of the growth of Belgian exports on products

One principal cause is to be found in the small consumption of coal, arising from im-proved methods of manufacture. Another cause is the diminution which has taken place in the wages of the workmen. Wages of skilled labor, which in 1872 stood at 11 francs, had fallen in 1876 to 5 francs and are now standing at 4 francs. Again, in Belgium, as soon as property is menaced government at once takes the necessary steps to protect peaceable industry. Troops solicited.

are called out. Order is re-established at any risk and at any price. This the work-men know, and the result is that they hesimen know, and the result is that they nesttate to strike, and their good sense, as a
rule, leads them to accept work at such
wages as they can obtain. It must be borne
in mind, too, that the Belgian workmen's
day is of twelve hours. He works from six
in the morning till six in the evening, time
he works give for weaks and he works give hours.

He works from six
in the morning till state of things." At Goteborg, in
February assorted bars were quoted at 168/ being given for meals, and he works six days a week. There is thus a saving on every element that enters on the cost of production, and the Belgian manufacturer is enabled to buy pig iron in England, pay for freight and to deliver that same iron manufactured and to deliver that same iron manufactured into beams and girders in the most central parts of England, or even in the heart of the iron districts, at a lower price than it can be made by English firms on the

To the above may be added some recent comments by the *Ironmonger*, a London publication devoted to the iron trade, as fol-

The Belgian is wise in his day and generation. He will accept orders for anything, and will do as much to serve the buyer of five tons as to meet the wishes of the purchaser of 500 tons. He will roll to any section and deliver on any conditions, and will not raise knotty points where they are totally unnecessary, but will look after actual business rather than waste his time in actual business rather than waste his time in splitting hairs. It is hardly too much to say, indeed, that the Belgian girder in this country has entirely grown out of the indisposition of our makers to produce rolled girders other than those of a very ordinary character, and the broad result of that unwillingness is that to-day Belgian girders and joists are almost exclusively used for our new buildings and in many instances. our new buildings, and in many instances the columns and pillars are also the products of the mills of Seraing, Liege and elsewhere over the Channel. What has been done in one branch may be done—we may almost assert is being done—in others."

Women and children, both boys and girls, work in the Belgian coal mines, and the Bel-

gian government has quite recently refused to prohibit their engaging in this unsuitable employment. Women also work at some Belgian i iron works, pushing wheelbar-

NORWAY.

No statistics of the iron industry of this country for a later year than 1870 have met our notice. In that year the total produc-tion of iron was only 5085 tons. The im-ports of iron into Norway are about 20,000 tons annually and the exports of Norway iron are about 2000 tons annually. In 1870 there were 15,115 tons of iron ore exported. In view of the very small production of iron by Norway, we are at a loss to understand whence come the Norway billets, bars and rods of which we have been accustomed to hear so much hear so much.

	1873. Metrical	1874. Metrical	1875. Metrical	1876. Metrical
Commodities.	tons.	tons.	tons.	tons.
Iron ore	832,857	926,825	822,200	796,957
Pig iron Castings from	339,685	332,154	343,551	344,834
furnaces Bar, band, rod.	6,187	5,843	6,974	7,788
&c	175,460	167,719	180,820	212,516
B'semer metal Oth. ingot mt'l	15,685	31,313	19,367	21,002
and steel	1,308	1,646	2,016	3.077
Plates	7,013	8,626	9,077	11,180
Nails	7,710	7,044	8,313	9,464
Rails		3,376	1,847	1,290
Tools and mfrs.	19,353	15,277	16,108	17,649

Total..... 1,409,085 1,489,822 1,419,363 1,425,687 It will be seen that the production of the four years prior to 1877 was practically stationary. The number of furnaces in blast in 1876 was 205, against 224 in 1875 and 217

in the Swedish iron mines in 1876, there were 421 women and girls.

The total exports of iron and steel from Sweden in 1875 and 1876 appear to have been as follows: 1875, 203,146 metrical tons; 1876, 174,862 tons. The exports of iron ore were as follows: 1875, 27,210 tons; 1876, 14,920 tons. These figures indicate a considerable decline in Swedish exports in 1876 as compared with 1875. Incomplete statistics of exports in 1877 show increased shipments in that year, but not equaling those of 1875. The imports of iron and steel into Sweden are quite large when the wonderful iron resources of the country and the aggregate of its iron

rails formed more than one-half of the total imports, and in 1876 just one-half.
Prices in Sweden in 1877 ruled exceedingly

very dull in Sweden during the year, sales having hardly reached 50 per cent. of the normal state of things." At Goteborg, in February, assorted bars were quoted at 168/ and at Orebro in the same month considerable quantities of pig iron were sold at 68/ to 76/, delivered at Nord. The English journal, Iron, recently remarked as follows concerning the "hard times" in Sweden: "A protectionist reaction has set in Sweden: "A protectionist reaction has set in in Sweden, following on the commercial distress of which this country has begun to have its proportion. The last year's harvest was an indifferent one; wood and iron have been slow to sell, and money has been unusually tight."

(To be continued.)

Thus far there have been nearly 10,000 mnes recorded in the Black Hills, and they are still being discovered at the rate of about 100 a week. For the year ending May 15, 1878, it was estimated that \$4,000,000 had been produced by the gulch and quartz

The Mexican indemnity payments bill, passed by Congress at its last session, provides for the payment of certain claimants in "Mexican gold dollars," a coin which does not exist.

With the sanction of the Customs Department a Canadian steamboat owner intends to test the legality of the recent order ex-cluding Canadian vessels from towing Canadian barges from Burlington to Whitehall.

According to the United States Circuit Court in Oregon, an alien must prove his good moral character during all the time he has been in the country ere he can be entitled to citizenship.

Hyatt's Patent Slot Bolt.

Patented Jan. 29th, 1878.

For Fastening Window Screens, Cabinet Ware, &c

We call the attention of the trade to these Wrought Brass Bolts as being the best and cheapest in the market. Sizes, two inches and upward, both plain market. Sizes, two inches and upward, both plain and neck bolts. Two screws (as shown in the cut) fasten the bolt and bed-plate to the wood; no others are required, thus effecting a great saving in screws and producing a strong, handsome and cheap Bolt. Price list furnished on application.

BRASS GOODS MFG. CO.,

Sole Manufacturers, 280 Pearl St., New York.

We also manufacture all kinds of Brass Goods, Plate Escutcheons, Drop Bases, Thimbles for Door Knobs Brass Labele, Patent Mirror Business Cards, &c.

TACKLE BLOCKS. Rope and Iron Strap of all kinds. Ligumvitæ Wood for Ten-Pin Balls.

Wm. H. McMillan & Bro., Office, 113 South Street, New York. Factory, 32 to 40 Penn St., Brooklyn, E. D.



SE. LITTLE,
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Agency for
BARNES' FOOT-POWER
MACHINERY.
6,000 already in use! 15 different machines with which
builders, cabinet makers,
cabinet makers,
in miscellaneous work can
compete, as to quality and
price, with steam-power manufacturing; also amateurs'
supplies, saw blades and designs. Hardware specialities,
Bend for price list.

THE CELEBRATED DECOY TRAP.

OLIVER,

Wire Cloth and Netting, Moulders' Riddles, Patent Decoy Rat Traps.

The Largest Screen and Flour Sieve Factory in the United States.

The only GENUINE D. R. BARTON Tools

THE D. R. BARTON TOOL CO., ROCHESTER, N. Y.

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Fancy Brass Goods and Small Iron Castings TO ORDER. THE TURNER & SEYMOUR MFG. CO.,



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AMERICAN MEAT & VEGETABLE CHOPPER,

PATENT ADJUSTABLE VISE, ATHOL, MASSACHUSETTS.

J. S. PARMENTER, Treasurer.

D. A. NEWTON, General Manager.

Referring to above card, we take pleasure in advising our former patrons, and the trade in general, that we have made arrangements to sen are exports are considered. In 1875 these imports amounted to 85,374 metrical tons, and in 1876 to 65,893 metrical tons. In 1875

ARTHUR EMORY, Commission Hardware Merchant,

No. 9 German St., BALTIMORE, MD.

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JACOBUS & NIMICK MFG. CO., Knobs, Locks and Latches, Tea, Counter and Platform Scales. Coffee and Paint Mills.

BELLAIRE NAIL WORKS, Wheeling Nails.

AMERICAN TACK CO., Tacks, Finishing and Clout Nails.

WESTERN FILE CO., Warranted Files.

H. M. MYERS & CO., Warranted Shovels and Spades.

Spades.
POWELL TOOL CO., Picks, Mattocks, Axes and
D. W. HAZLETON & CO., Manufacturers of Curry

POWELL TOOL CO., FIGES, MALUES AIGS AND SUPPOSE TOOLS.
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MARIETTA HOLLOW WARE AND ENAMELING CO., Maslin Kettles, Saucepans, &c.
HARVEY W. PEACE, Warranted Cast Steel Saws of every description. ING CO., Maslin Kettles, Saucepans, &c.

HARVEY W. PEACE, Warranted Cast Steel Saws of every description.

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OHIO TOOL CO., Planes, &c.

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WATERBURY BRASS CO.'S Kettles, Copper
Rivets and Burs.
PICKET'S Sand Paper.
LOCKPORT Lock Faucets. RTERS FOR:

LAWRENCE CURRY COMB CO.'S Curry CombsH. CHAPIN'S SON, Rules.
INTERNATIONAL Horse Nails.
WM. A. IVES & CO.'S Auger Bits.
R. HEINISCH'S SONS' and R. H. S. C. S. Shears.
ONEIDA TEA and TABLE SPOONS,
UNITED STATES CARTRIDGE CO., Cartridges.

Large Stocks carried with me, by manufacturers I represent, at the lowest discount, for the convenience of Southern jobbers. Desirable consignments

Sectional View of the Snap. If you want the best at reasonable prices send for illustrated circular and price list of the celebrated Covert Harness Snap, Horse and Cattle Ties, Breast Chains, Halter Chains, Post Chains, Rein Chains, &c. These goods are sold by all leading jobbers in General and Saddlery Hardware at manufacturers' prices. Sample snap sent free of charge if desired Address

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B. KREISCHER & SONS, New York Fire Brick & STATEN ISLAND CLAY RETORT WORKS.

Established 1845. Office, foot of Houston Street, East Rever, NEW YORK.

The largest stock of Fire Brick of all shapes and sizes on hand, and made to order at short notice. Cupela Brick, for McKenzie Patent, and others. Fire Mortar, Ground Brick, Clay and Sand. Superior Kaolin for Rolling Mills and Foundries. Stone Ware and other Fire Clay and Sand, from my own mines at New Jersey and Saten Island, by the cargo or otherwise.

NEWTON & CO.,

ALBANY, N. Y., Manufacturers of

FIRE BRICK Stove Linings,

Range and Heater Linings Cylinder Brick, &c., &c,

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FIRE BRICK **And Furnace Blocks** DRAIN PIPE & LAND TILE.

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For Rolling Mills, Blast Furnaces. Foundries Gas Works, Lime Kilns, Tanneries, Boiler and Grate Setting, Glass Works, &c. CLAYS, FIRE SAND, AND KAOLIN FOR SALE

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Tuyeres, Tiles, Blast Furnace Blocks, etc. Miners and Dealers in Woodbridge Fire Clay and Sand, and Staten Island Kaolin

Established 1864. CARDNER BROTHERS

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PHILADELPHIA Eighteen years' practical experience CYRUS BORGNER.

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The TRENTON VISE & TOOL WORKS, Trenton N. J., having increased their facilities, are now able to do all kinds of

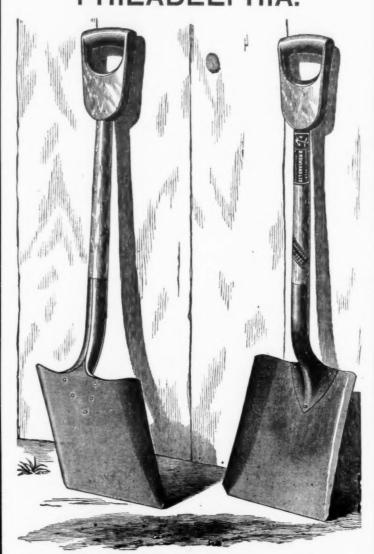
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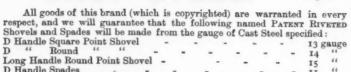
B. Rowland & Co.'s Patent Riveted Shovel. CAST STEEL.

We would particularly call the attention of the trade to the Patent B. Rowland & Co.'s Anchor Brand Shovel, as now manufactured by us, possessing as it does improvements in construction which render it the most perfect STRAP Shovel made. In it the old style of back strap is entirely dispensed with, and a front strap substituted, riveted and clamped firmly to the blade, clasping the handle in the manner of a ferrule, thus obviating all danger of tearing off strap and making a more beautiful finish front and back. These improvements add to the appearance of the shovel, enhancing its durability at least one-third, and warrant the assertion that all the Shovels we manufacture from this patent will prove the most desirable ever offered the confacture from this patent will prove the most desirable ever offered the con-

sumer.

The above advantages are also especially noticeable in our Spades and

B. Rowland & Co. & CAST STEEL



ong Handle Round Point Shovel D Handle Spades
D " Western Coal Shovel 66 Anthracite Coal Shovel Gauged by Stubbs' Gauge.

B. ROWLAND & CO.,

CITY OFFICE.

27 North Fifth Street, Philadelphia, U. S. A. Works at Frankford, Phila., U.S.A.

NEW YORK WAREHOUSE, 100 Chambers St.

MACOMBER, BIGELOW & DOWSE,

Nos. 156 and 164 Oliver St., Boston, Mass., NEW ENGLAND AGENTS.

THE PARIS EXPOSITION

Notes of American Exhibits.

(From our Special Correspondent at Paris). One of the most attractive and interest-ing exhibits to be found in any department of the Exposition is the splendid display of HENRY DISSTON & SONS,

Philadelphia. It is the wonder and admi-Philadelphia. It is the wonder and admiration of visitors from all countries, and even those who are not practically acquainted with saws and tools are attracted by its novel beauty. One fact that makes it especially interesting to an American, and at the same time a cause for congratulation, is that among the vast numbers of articles exhibited there is not one in which all the processes of manufacture, from first to last, were not conducted on Messrs. Disston & Sons' premises. The steel for the saws and tools was all made at their works, rolled there, and worked into the various forms, and the same may be said of the other ma-terials that enter into the construction of their tools. So careful have they been to preserve this feature in their exhibit that they have excluded from it their band saws, the blades of which are made abroad. It is no light matter to make steel of a quality suitable for tools that have the reputation to suitable for tools that have the reputation to sustain that those of this firm have, and in this country when such steel has been furnished or made, the fear that prejudice would interfere with the sale of the goods has too often prompted the concealment of the fact; but this firm make their own steel, and do not hesitate to say that they use it exclusively. It was no part of the late Henry Disston's business policy to seek favor by concealing the truth. On the contrary, he boldly undertook to break down the prejudice which once existed against American steel, by proving that it could be made of first quality, and that nowhere in the world could better saws be had than were made in the United States, and of home-made materials. United States, and of home-made materials. His straightforward honesty succeeded where duplicity would have failed, and his brilliant business career is in no small degree due to his unflinching courage in meeting and over-coming the difficulties which surrounded the manufacturers who first ventured to discard English and substitute American steel in the

fabrication of tools. Messrs. Disstons' exhibit is installed in an upright black walnut case, 16 feet long, 6 feet wide and 15 feet high, surmounting a cabinet of drawers. The saws are arranged in the positions in which they are used. Bising through the floor of the show case is Rising through the floor of the snow case is a 60-inch circular saw, the upper half show-ing from both sides of the case. This is in motion, and reflects the light with dazzling brilliancy. Radiating from this, in the front side of the case, is a line of hand saws, 19 in row upright spaces on the ends are occupied by mill saws 6 feet 10 inches by 10 inches. On the opposite side of the case we have the other side of the great 60-inch circular, besides a 34-inch shingle, two 18-inch concaves and one 34-inch flange saw, all in motion. There are 57 pieces on this side, including double-handled saws, from the 6½-foot Great American to a tennon saw about 5 feet long. Among other objects of interest we notice two one-man cross-cuts, two 28inch rips, two 6-foot pit saws, keyhole saws, bevel gauges, squares, hack saws, webs and many other pieces. On the inclined floor of the case there is a fine display of bevels, gauges, screw drivers, levels and level

YALE LOCK MFG. CO.,

has not been placed here merely for exhibition, but for use. It serves as the post office delivery for the American section, and its convenience to exhibitors is very great. All mail matter for the American section is delivered here and distributed to the boxes or arranged in the alphabetical cases. An American has all the postal conveniences to which he is accustomed at home. The general construction of the Yale Lock Box is a wooden pigeon hole with a metallic front, consisting of a frame and door hinged together. In the upper panel of the door is the lock and in the lower a glazed opening which permits the contents of the box to be seen when the door is closed. The exhibit of this company consists of a room which is used as a mailing and distributing office; one side is occupied by the boxes and delivery window of the post office, such as we have described. The advantages of the Yale system are so great that it is attracting the attention of foreign governments, who through their representatives are examining it with

a view to introducing it. It is already adopted largely by the United States and Canadian governments. It is also in use in Manitoba, Prince Edward's Island, British Columbia, Central America, Australia and Japan, 80,000 being in use. This company furnish post office equipments of every kind, furnish post office equipments of every kind, and make a specialty of fitting up post offices either in part or complete, including lock and call boxes, counters, delivery wickets, money order wickets and desks, alphabetical cases for general delivery, as well as letter drops, direction plates, &c. In the other sides of the outside of this post office to which we have referred, glass show cases have been inserted, in which are displayed some beautiful specimens of their manufactures, including some very fine time locks for bank vaults and safes, as well as elegantly for bank vaults and safes, as well as elegantly finished Yale locks of ordinary pattern. There are also some beautiful specimens of bronze and enamel builders' hardware. In the Machinery Hall

GEO. VAUX CRESSON

of Philadelphia has a very fine display of pulleys, hangers, internal clamp couplings, pillow blocks, adjustable mule or guide pul-leys, and, in fact, a full line of manufac-tures of this class used in the transmission of power. The exhibit includes samples of but a small part of the very extensive line of articles of this class manufactured by Mr. of articles of this class manufactured by Mr. Cresson, but the variety shown is great. The design of the exhibit is an arch supported on two columns. In the center of the exhibit, under the arch, is a large pulley with the patent internal clamp hub, which was in use at the Philadelphia Exposition driving one of the main lines of shafting in Machinery Hall. It shows not the least wear. The patent internal clamp columns. least wear. The patent internal clamp coup-ling, the only shaft coupling which received a medal at Philadelphia, attracts a good deal of attention. It is very simple, but most effective. It can be put on the shaft or removed in a few minutes, there being but one piece to handle. None of the adjusting parts are exposed to any strain or liable to be broken, work loose or rust fast. Another excellent device is the internal clamp hub used with driving pulleys. This gives a perfect fit on the shaft, without forcing machine or sledge hammers. The line hangers and pillow blocks have adjustable bearings and the pulleys are well balanced, well propor-tioned and from most approved patterns. Mr. Cresson makes a specialty of these goods, and was, we believe, the first to give his exclusive attention to the manufacture of shafting and pulleys. Every care has been taken to make his goods perfect and to have the exhibit embrace all possible sizes.

BROWN'S PATENT CALORIC ENGINE CO.,

New York, exhibit in Agricultural Hall one of their engines. Their special value is for lighthouse service and other uses where water of suitable quality for evaporation is scarce or difficult to obtain. Even when of number, showing some of the styles made by the firm. At the top, equidistant from the ends, is an 18-in. concave saw in motion. To the right and left of this are groups of hand saws of different kinds and sizes, webs, two mill webs 4½ feet × 5½ inches, nests of circular saws, and samples of surgeon's, pruner, buck, compass, Japanese, butcher's, pork packer's and kitchen saws. On this side 91 pieces are shown. The narrow upright spaces on the ends are occupied by mill same 6. packing of the working cylinder is so arranged as to be far away from the heated air. This is accomplished by the use of a long plunger, protected at the bottom by a thick layer of plaster. Below this there is an air space, made by a sheet-iron drum. The advantage arising from thus protecting active transpaces are sufficient to the second seco air space, made by a sheet-iron drum. The advantage arising from thus protecting not only the packing but the metal of the plunger itself from the heat are very great, and the packing should prove very durable. An expansion gear is provided, and as the exhaust valve is worked by an independent eccentric, any desirable degree of expansion may be easily obtained. The apparatus for accomplishing this is exceedingly simple. When desired, an air compressing cylinder or a pump can be attached to the engine or a pump can be attached to the engine advantageously. This is done by adding another bearing or arm to one end of the gauges, screw drivers, levels and level glasses, squares, straight edges, swages, saw another bearing or arm to one end of the sets, saw gauges, side files, and a general assortment of tools for keeping saws in order. The sides of the case are covered with great plates of French glass. The goods exhibited are in every instance of the furnace is arranged an apparatus by which the fire may be fed with coal or coke when the engine is in motion, and without reducing the pressure within a straight edges, swages, saw another bearing or arm to one end of the walking beam and driving the pump by a connecting rod from the beam. Upon the top of the furnace is arranged an apparatus by which the fire may be fed with coal or coke when the engine is in motion, and without reducing the pressure within a straight edges, swages, saw another bearing or arm to one end of the walking beam and driving the pump by a connecting rod from the beam. Upon the top of the furnace is arranged an apparatus by which the fire may be fed with coal or coke when the engine is in motion, and without reducing the pressure within a straight edge. The goods examined are in every instance of the firm's most approved patterns. Besides the firm's most approved patterns. Besides those displayed there is a large assortment of saws and tools in the drawers, which are shown to any one who may want to see them.

Arrangements are also provided for subject-equalizes the pressure between the receiver Arrangements are also provided for subjecting them to as severe a practical test as visitors or jurors may desire. The firm claim that the goods are of better quality, form and finish than any with which they come in competition in the Exhibition from this or any other country, and are desirous that this claim shall be fully substantiated by whatever practicable means can be suggested. The exhibit, as a whole and in detail, is entirely creditable to American inbearings are all case-hardened. The framgested. The exhibit, as a whole and in detail, is entirely creditable to American industry and enterprise, and will add much to ing of the engine is well designed, the strains the already world-wide reputation of this being taken in direct lines, and flanges, webs firm. AIKIN & DRUMMOND,

Stamford, Conn. We have so recently and so thoroughly entered into the details of the construction of the Yale lock (see The Iron Age of May 23), that we need only in this notice describe their very extensive and convenient exhibit. Its main feature is a complete post office with all furniture and equipments. This has not been placed here merely for exhibition, but for use. It serves as the post office delivery for the American section, and its convenience to exhibitors is very great. All furnitures and furniture and equipments are attached to the head, and sectional plates are fitted to surround the patterns and furniture is very great. All furnitures are made to the follower:

shaft continues its revolution the patterns are withdrawn from the mold, while the molded sand is supported by the sectional follower, which is afterward withdrawn, leaving the mold complete and ready to be carried away. This machine is intended to mold for such castings as gas and water-pipe fittings, cocks, valves and a variety of plumber's goods, thimble skeins, axle boxes, pump chambers, sash weights, sad irons, plow clevises, and, in fact, all castings of a similar character. The machines are all made of iron, in a neat and substantial manner, the works being fully protected from the sand. They require no more room than the ordinary hand bench, and as one machine will turn out at least four times as many molds as can be turned out on a hand bench, quite a saving is gained in room. The great merit of the machines is the fact that no skilled labor is required; a good stout boy can manage them after receiving a very few days' lessons, as the machine sets the patterns, rams the sand and draws the pat A more complete mold is formed thereby producing smoother and more uni-form castings, by this method than can pos-sibly be done by any other known process. There is no rapping of patterns or sponging of molds required, thus producing castings exact duplicates of the patterns. The machine will make molds as fast as flasks can be put on, filled with sand and carried away. The patterns being fastened to the machine will last much longer than when used in the ordinary manner, thus making a great saving in repairs. The ordinary snap flask or iron flask (with or without bars) fitted to the machines can be used, as in the usual manner of hand or press molding. Messrs.

A. & D. are preparing to place on the mar-A. & D. are preparing to place on the mar-ket a double reversing machine, which is intended to mold that class of work which requires the patterns to be drawn up out of the sand. Such, for instance, as gear wheels, pulleys, locks, hinges, window rollers and frames, stove plate, hollow-ware, and in fact an endless variety of staple castings for the hardware trade and agricultural im-plements. The machines are driven by a plements. The machines are driven by a plements. The machines are driven by a belt from any power, friction wheels being used to operate the molding parts, thus in-suring a steady power. Where it is not con-venient to use power they can be worked by hand.

T. R. PICKERING & CO.,

Portland, Conn., exhibit in Machinery Hall samples of The Pickering Governor with the latest improvements, automatic stop motion and speed adjuster. The object of this invention is to secure a more simple, durable and sensitive regulator of steam processes than it has been possible to obtain engines than it has been possible to obtain by the old style of "ball" governor, the sensitiveness of which is quite limited, ow-ing to the fact of its action depending on the law of gravitation. The centripetal force being entirely due to the tension of springs, the valve is not carried past the desired point by the momentum of heavy balls, as is generally the case when sudden variations take place in the amount of work being done by an engine supplied with the old style of governor. The requisite centripetal force and stiffness is obtained without making the springs too heavy, by their peculiar con-struction; also in the shape of the curve given them, by the manner in which the ends and middle portions are secured, keeping those parts at all times parallel with the center of motion. By this arrangement such thin steel can be used that all liability to break, or tendency to "set" or lose its elasticity is dispensed with; while, by using two or more strips together the required extendence. more strips together, the required centripetal force be can obtained. The peculiar curve force be can obtained. The peculiar curve obtained by this arrangement is called a double cyma, by the use of which two or more strips, firmly secured together, will work freely, without any tendency to buckle or interfere with each other's action. The ends of the springs are secured to flanges, the lower of which, resting on steel washers and having a collar to prevent its rising, is capable of only a rotary motion: while the capable of only a rotary motion; while the upper one being at liberty to move lengthwise as well as to rotate, receives its rotary motion from the lower one, through the springs, and communicates any lateral mosprings, and communicates any lateral mo-tion due to the varying centrifugal force immediately to the balanced valve, to which the governor is firmly secured by the bracket, a part of which forms a long bear-ing for the horizontal shaft, which commu-nicates motion from the power to the gov-ernor through the miter gearing. Having no joints this governor is extremely sensi-tive. The improved stop motion attached tive. The improved stop motion attached to the governor will instantly shut off steam in case the governor belt breaks or runs off, as its construction is such that the value. as its construction is such that the varie is held in proper connection with the governor only while the belt is in its proper position, and should the belt break or run off either pulley the connection between valve and overnor is severed, the valve closed and locked in that position until the belt is properly adjusted. The tension of a spiral properly adjusted. The tension of a sprain spring, acting on a collar on the valve stem, is used as a means for increasing the resistance to the centrifugal force of the governor balls. The speed of the engine may be adjusted by varying the tension of the spiral spring. This is effected by the very simple weekening of a ratchet, wheel and nawl. mechanism of a ratchet wheel and pawl, which may be manipulated while the engine is in motion, thus varying the speed as may be required.

THE GOODYEAR & M'KAY CO.,

of New York, make an exceedingly interesting exhibit of machinery for making boots and shoes. It is the largest machinery exhibit in the section, and is especially no ticeable as showing the ingenuity of our me-chanics and their achievements in a single

THE HANCOCK INSPIRATOR,

a feeder for stationary, marine and locomo tive boilers is shown in the agricultural avenue. The exhibit includes a variety of styles for these uses. It is claimed for it that it is simple in its parts, reliable in its operations and always in order; that it con-sumes less steam than any other boiler feeder known and requires no oiling. Its merits in use are its simplicity of operation, the great range of its duties and the fact that all the steam used in operating it is returned to the boiler, there being no loss, excepting by radiation, from the pipes used in connect-ing. It differs materially in its construction

from the class of boiler feeders know as injectors, inasmuch as it has one set of tubes for lifting and another set of tubes for forcing water—a combination entirely new reliable and efficient. There being no mov reliable and efficient. There being no movable parts in its internal construction it is not liable to get out of order, requires no oiling or adjusting to the varying steam pressures or lifts, and is always ready to start at a moment's notice. Water can be delivered at a high or low temperature, as may be desired. No adjustment is required for varying steam pressures; all sizes will lift water 25 feet, working as well on a 25-foot lift as on a low lift.

C. H. DELAMATER & CO.,

No. 10 Courtlandt street, N. Y., display a complete line of D. L. Kennedy's patent concentrated power shearing and punching machines. The exhibit consists of 8 shears, 7 punches, 2 screw punches, I flange punch, large Rainard punch, capable of punching 1/6-inch and 5/6-inch iron. There are three izes of bar shears which cut from 1/6-inch by 1 ½-inch bar and ¼-inch round, up to inch by 4-inch bar and %-inch round. plate shears cut up to $\frac{3}{26}$ -inch sheet any width. There are two punches which punch No. 2 $\frac{3}{26}$ -inch and smaller holes in $\frac{3}{26}$ -inch iron $\frac{2}{26}$, 5-16-inch and smaller holes in $\frac{3}{26}$ -inch iron, $\frac{4}{26}$ inches from edge; No. 2 $\frac{3}{26}$, 5-16-inch and smaller holes in $\frac{3}{26}$ -inch iron, $\frac{4}{26}$ inches from edge to center of hole; No. 3, Kinch and smaller holes in $\frac{3}{26}$ -inch iron, $\frac{3}{26}$ -inch ir ½-inch and smaller holes in 5-16-inch iron, 6 inches from edge to center of hole. The flange punch is ¾ inch in ¾-inch iron and ¾ inch in ½-inch iron. The working parts of all these machines are of wrought steel and will cut gearing. The manufacturers call particular attention to the quality of the work done with this punch, claim that it does not mutilate the iron as does the comme punch, and in consequence a large amount of work can be done with it that is now required to be drilled. They state that the extraordinary working of these machines as witnessed at the Centennial, and the ease with which they cut and punched iron, as compared with any others ever before known, excited the wonder of scientific and practical men from all countries; and great numbers were purchased by workers in metals in England and on the Continent and carried home for use in their own manufac tories and workshops, as well as by the scientific commissions, for their respective governments, as wonders of American pro WM. J. DAVIS.

Philadelphia, exhibits in the Main Building some specimens of the anchors constructed in accordance with his patents.

Special Notices.

SITUATION WANTED—In the Hardware business by a young man who has been eleven years with a New York manufacturing and jobbing house of builders' and general hardware, as general salesman and buying clerk. Unquestionable reference and satisfactory reason for leaving present employers. No objection to going to any part of the country. Address W. A. W.,

Office of The Iron Age, 83 Reade St., N. Y.

For Sale or to Rent! RARE OPPORTUNITY!!

Richmond Architectural Iron Works, established for more than 20 years, embracing a centrally located lot of 130 feet front on Cary street, running back on the line of Eleventh Street 150 feet to an alley 20 feet wide. The improvements consist of a machine shop, built of brick and covered with slate, 60x150 feet, of 3 full stories, exclusive of cellar and attic. A brick foundry 40x50 feet, and brick offices and pattern shop, 30x50 feet.

In the foundry are two large cranes, No. 5 Mc-Kenzie Cupola and Sturtevant blower.

The machine shop embraces a complete outfit of valuable tools, as Machine Lathes, Drill Presses, Iron Planer, Bolt Cutter, Emery Machines, &c.

A collection of patterns of great variety, embracing almost every order of architecture. In fact every thing necessary to "start up" the works at once for a business of \$200,000 per annum.

The property will be sold at a great sacrifice from the original cost.

the original cost.

Purchaser can divide the machinery, patterns &c., from the real estate if he does not care to buy the latter. Proffers for a lease of the whole property; or for the machinery, patterns, &c., with such portions of the real estate as may be needed for the conduct of the business will be entertained. Apply in person or by letter to wm. L. Cowardin, Pres't, No. 1015 Main St., Richmond, Va.

AUGUST LIST, No. 2.

Second-Hand.

Two Woodruff Steam Engines, automatic cut off, cylinder, 20 inch diameter, 48 inch stroke. One Portable Engine, 7 in. cylinder. One No. 3 Stilies Geared Press.

One No. 2 Fowler Press.

One No. 2 Stules Geared Press.
One No. 2 Fowler Press.
One Crank Planer.
One Sellers 500 lb. Steam Hammer.
One Sellers 500 lb. Steam Hammer.
One 600 lb. Drop Hammer.
One Hand Milling Machine.
One "Pond" Index Milling Machine.
Two Engine Lathes, 13 in. swing, 6 ft. bed.
Two Engine Lathes, 13 in. swing, 6 ft. bed.
One Engine Lathe, 76 in. swing, 3 ft. bed.
One Engine Lathe, 15 in. swing, 6 ft. bed.
One Engine Lathe, 15 in. swing, 6 ft. bed.
One Engine Lathe, 15 in. swing, 6 ft. bed.
One Engine Lathe, 15 in. swing, 6 ft. bed.
One Engine Lathe, 15 in. swing, 6 ft. bed.
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One Engine Lathe, 15 in. swing, 6 ft. bed.
One Engine Lathe, 15 in. swing, 6 ft. bed.
One Engine Lathe, 15 in. swing, 6 ft. bed.
One Engine Lathes, 22 in.
swing, 8 ft. bed. Two Engine Lathes, 22 in.
swing, 8 ft. bed. Six Turning Lathes, 14 in. swing, 45 ft. bed. Three 4-spindle Drills. One 387328 ft.
Flaner. One 48748712 ft. Planer. One 8 in. Shaper.
One Gear Cutter. One new "Hardaway" Bolt Heading Machine; to head up to 15 in. bolts. One new "Hardaway" Bolt Heading Machine to head up to 15 in. bolts. A lot of Saw Tables and Wood Working Machinery.
Please specify which of the above tools you want and we will forward all particulars.
The above tools will be sold very low, and can be seen at

The George Place Machinery Agency, 121 Chambers and 103 Reade Sts., N. Y.

Hardware Business For Sale.

One of the finest Hardware Stores in Western New York, with a choice stock of Hardware. Located in a growing village, with first-class schools and churches, surrounded by a rich farminess consolitated over states of the Business established over six years, with to move to California. Heason for selling out, with to move to California. Address. A WAKEY, Y.

Special Notices.

BISSELL & WELLES,

AUCTIONEERS.

Office of
THE TABLE CUTLERY ASSOCIATION OF THE U. S.,
New York, July, 1878.

To the TRADE: Hereafter all "Seconds" made by the members of this Association will be sold at auction through Messrs. Bissell & Welles, Auctioneers, at their salesroom, No. 83 Chambers and 65 Reade streets. No sale of Seconds will be made in any other way.

By order of the Association,

R. N. OAKMAN. C. S. LANDERS, B. B. VALE.

Executive Committee H. A. CURTISS.

Referring to above announcement, we will state to the trade that we will make our first sale of Seconds for the Association in our trade sale of August 29 and 30.

BISSELL & WELLES,

AUCTIONEERS.

MANUFACTURERS

Hardware Specialties

will find an opportunity for securing the control of a tool which should be in the hands of every mechanic. For a new tool it has met with great success wherever introduced. There is a growing demand for it. Present manufacturers desire to dispose of it in consequence of their own busine which is of a different character, requiring all their attention and capital. Address

"SPECIALTY,"

Office of The Iron Age, 220 S. 4th St., Phila., Pa.

To Manufacturers and Jobbers of Hardware, Cutlery, &c.

Manufacturers and Jobbers, having surplus stocks or goods that from any cause are unsale-able upon which they wish to realize, or assignees who have stocks to dispose of, will find a cash purchaser by communicating with.

W. M. CALDWELL,

Job and Auction Lots of Hardware. Cutlery, &c., 102 Chambers St., New York.

H. Y. CASTNER,

Analytical Chemist and Assayer.

Assays of Ores and Analytical Work of every character promptly attended to. Specialty made in the Analyses of Coals, Pig Irons and Iron Ores.

No. 43 Pine St., New York. Terms moderate. Instruction for obtaining proper sample furnished upon application.

SECOND-HAND MACHINERY.

One Steam Hammer, cylinder 10x32.
One Davy Steam Hammer, cylinder 12x12.
One Davy Steam Hammer, cylinder 12x12.
One train Rolls, 16 inch, one train Rolls, 8 inch, both with housings complete; one pair large Shears; two 40 H. P. Locomotive Boilers. All in good order and for sale cheap for cash or in exchange for Old Metals. By

DANIEL W. RICHARDS & CO.,
88 to 96 Mangin 8t., New York.

HARDWARE SALESMAN.

A young man of several years' experience in the Hardware business desires a situation in a good Hardware House. Speaks English and German. Best of references given.

Address. Hardware Salesman,
Office of The Iron Age, 83 Reade St., N. Y.

A Member

Of a responsible firm, age 35, with an experience of 20 years in the Hardware Trade, in anticipation of a fall and winter trip in the Southern States for health, would represent in that territory parties of known standing. For name, reference, particu-lars, &c.. Address "WORK," lars, &c., Address

Office of The Iron Age, 83 Reade St., N. Y.

TWO YOUNG MEN

With moderate cash capital wish to purchase established Hardware Business.

Address,
Office of The Iron Aye, 83 Reade St., N. Y.

SITUATION WANTED-AS TRAVELING Agent. Eleven years' experience in the Hard-ware business. Have traveled five years for a manufacturing house in New York city. Good city and State trade. Have also traveled in the West-ern States. Satisfactory reason for leaving present employers. Address, LUCKS, "

Office of The Iron Age, 83 Reade St., N. Y.

Wanted,

Situations by two thoroughly practical men, viz., Roller and Roll Turner. Fully experienced in Rails (iron or steel), Angle, Tee, Channel, Beam, Merchant and Band Irons. Best of reference from last employer. Address, J. CAWFIELD,

WANTED.—A first-class business man familiar with machinery and manufacturing, capable of handling large bodies of men, desires a responsible poetion. References satisfactory. Address, IRON AND STEEL,

Care of P. O. Box 813, Bridgeport, Conn. Proposals for Box Openers or Natl

Special Notices. JENNINGS'S COMBINATION DISCOUNT TABLES.

(Published by the author.)

This Book contains 1500 tables for single and com bination discounts, such as 171/2 %, 45 %, 10&71/4 %, 1585 %, 258 10 %, 331/8582 %, 35871/282 %, 4585810 %, 60&10&5&10%, 65&5&10&2%, 65&10&10%, 75&15% &c., &c., which are so arranged as to be found without loss of time, and by their use either the Discount or Net on any amount of dollars and cents, from a penny to one million dollars, can be ascertained in a few seconds entirely by Addition. Just the thing for making or proving invoices, finding Net Value of goods bought or sold, and comparing different Discounts, thereby saving time, blunders and Headwork.

Size of Book, 11 inches long by a inches deep, Contents, 50 pages, 30 Tables on a page, solid figures. A copious Index, &c.; 70 pages in all. Editorial Notice from The Iron Age, dated

Feb. 21, 1878.
We have received from Mr. S. H. Jennings, Deep River, Conn., a copy of his new book, enti-tled "Jennings's Combination Discount Tables," and after a careful examination we very cheerfully commend it to the trade, believing it will fill a want that has hitherto been unsupplied. The book contains 1500 tables for sirgle and combina-tion discounts, such as 35 per cent., 37½ per cent., as and s per cent., 60 and s and 71/2 and 2 per cent. &c., which are so arranged as to be found without loss of time, and by their use either the discount or net, on any amount, from a penny to one mil-lion dollars, can be ascertained in a few seconds,

entirely by addition.

By a novel arrangement of the tables they work qually well on either cents or dollars. Their principal uses are proving invoices received, making or proving bills of goods sold, and finding the net cost of separate articles on invoices of goods bought; but aside from this, the work being very comprehensive in its character, in fact covering the whole field of discounts, it must prove valuable as a book of reference when it is desired to compare different discounts, or to ascertain what results certain changes in prices would accomplish. We understand that it is highly spoken of by those who are using it, and we see no reason why it should not become a standard work for discount purposes so soon as its merits are known and appreciated The publisher offers to send the book by mail, The publisher offers to send the book by man, postpaid, to any address, on receipt of the price, \$3. This price seems moderate when the labor of compilation is considered, the quality of the paper, the printing, binding, &c., all of which show care and determination on the part of the author to furnish a book that should be accurate, and which with ordinary care will last a lifetime.

It will be mailed, postpaid, to any address, on receipt of the price, \$3. Currency may be sent by a complete the price of the price, \$3. Currency may be sent by Blower. One 86 in. Merrill Drop Hammer, good as new, 75 feet zelin Double belt.

S. H. JENNINGS, Deep River, Conn

To Steel Manufacturers.

An energetic young man with scientific training, who has had experience in the manufacture of Bessemer and Crucible Steel, in preference to remaining unemployed would be willing to take a subordinate position with the prospect of being employed as blower in Bessemer or as melter in Siemens-Martin steel works. Highest recommendation as to infegrity, character and ability furnished. A correspondence, which shall be strictly confidential, respectfully solicited.

Address, Box 1308, New York. J. H. JENKS & CO., Manufacturing Machinists

180 Centre Street, New York,

are prepared, with a superior equipment of first-class tools and experienced mechanics, to contract for the designing and construction of special TOOLS, DIES, JIES, and GAUGES for duplicating interchangeable parts of the machinery or sheet metal goods. Contracts for manufacturing staple goods in quantity solicited.

Second - Hand Machinery For Sale Low.

SEND FOR LIST.

Engine Lathe, built by Seth Wilmarth, 82 in. swing, 23 ft. bed, live spindle hollow, face plate both ends, one at front 6 ft. 4 in. diameter, one at rear 7 ft. 1½ in. diameter, two boring bars traversed by tail spindle, both arranged for splining key ways; one of these bars is designed for work on rear face plate and has yoke to support outer end; on either face plate work may be bored, turned and splined without removing the fastenings. At rear face plate an adjustable tool rest, the latter having 3 ft. 6 in. traverse, arranged to sit at any angle and in any position on above bed. Tail spindle is 5½ in. square, carriage is fed by a screw the full length of bed, cross feed automatic, 6 grades of feed to operate either, 10 grades of speed for live spindle, driving movement gears direct to front face plate, complete with counter-shaft for driving, splining and feeding. One large saddle or center rest.

uriving, splining and feeding. One large saddle or center rest.

Planer, built by W. Collier & Co., Salford, Eng., planes 54 in. wide, 48 in. high, 18 ft. long, autoinatic cross, vertical and angular feed, platen driven by gearing into step rack, return motion about 3 to 1; has third upright with vertical tool slider, automatic feed, to plane work that will not pass between the regular uprights. This slider has a vertical movement of 5 ft. 4 in. Countershaft.

HOLVOKE MACHINE CO., Holyoke, Mass.

SPECIAL NOTICE.

The undersigned offer their services as agents to American Producers of Metals. They represent foreign brands of Zine, Russia Iron, Hoop Iron, Window

Glass, Cutlery and Guns.

Proposals for Box Openers or Nail Drawers.

Quartermaster's Office, 1139 Girard Street.
Philadelphia, August 6, 1878.

Sealed Proposales, in triplicate, subject to until noon, Saturday, August 31st, 1878, and opened immediately thereafter, for furnishing and delivering at the Philadelphia Depot of the Quartermaster's Department, Schuytkill Arsenal, (200) Two Hundred Box Openers or Nail Drawers. A sample of the implement proposed to be furnished should accompany each bid.

The United States reserve the right to reject any or all bids. A preference will be given to articles of domestre production.

Envelopes containing bids to be marked; "Proposals for Box Openers," and addressed to the undersigned.

J. J. DANA, Major and Quartermaster.

Special Notices.

W. GARNER, General Merchant,

Mouldsworth, near Chester, England,

Supplies nearly every class of Goods, including all kinds of

Agricultural Machinery, Domestic Machines.

SEWING MACHINES

And Artificial Manures.

W. GARNER is open to represent any Foreign Manufacturers in England for the sale of their nanufactures of whatever nature or kind. Having a wide and well established connection in the Provinces, could introduce some American, German and French products to mutual advantage.

W. GARNER is also open to buy any kind of Goods mission, and ship them to any part of the Manufacturers or others desiring his assistance will please address (with full particulars in English) as above.

THE

Norwich Lock Mfg. Co.

Norwich, Conn.,

Having largely increased their line of Locks, Knobs, &c., and the facilities for their manufacture, solicit the especial attention of jobbers and purchasers for export to their goods.

SIDNEY TURNER, President.

CHAS. H. BEEBE, Treasurer.

Second-Hand Machinery.

One 14 in.x30 in. Whitehill & Smith Adj. Cut-off En-ine, Wheel to ft. diam., and One 54 in.x16 ft. Tub'r Boiler for same; both almost

E. P. BULLARD, 14 Dey St., New York.

For Sale,

Valuable Manufacturing Property. Foundry and Machine Shop capable of producing the heaviest work. Large yard room, a good wharf and railroad connection by spur track. Situ-ated at South Norwalk, Conn. Terms reasonable.

E. HILL, Trustee. AUSTRALIA.

AMERICAN HARDWARE CO.,

No. 9 WILLIAM STREET, MELBOURNE, AUSTRALIA,

Solicit correspondence with American manufac-turers desirous of representation in the Australian Colonies, Consignments will have prompt atten-tion. References furnished.

MILLET & BILGER,

Auctioneers and Commission Merchants

112 Chambers St., New York. Solicit from manufacturers, importers and jobbers consignments of Hardware, Cutlery, House Furnishing Goods, &c., &c., for their regular weekly sales, C. A. MILLET, formerly of formerly of Bissell, Welles & Millet.

R. T. Haizell & Co

The Sherman Process Co.

9 Pemberton Square, Boston, Mass., Issue Licenses to use the Process for the Manufacture of Iron and Steel

In the Bessemer Converter, Crucible, Siemen Martin, Puddling, Blast and Cupola Furnaces. The use of this Process improves the quality of the product, saves fuel and labor, and does not re-quire any change in furnace or manner of working. See page 17 of The Iron Age of Oct. 25th, 1377.

Wanted-A Partner.

In a foundry and machine business, already well established. Locality splendid and healthy. A practical man with means is wanted to join a practical man who is already well establish CAR WHEEL FOUNDRY, Address

P. O. Box 134, Selms, Alabar HARDWARE BUSINESS FOR SALE.

Rare chance to purchase stock of a well-established business in central Illinois. Stock will invoice about \$6,000. The best of reasons given for selling. Address "HARDWARE,"

Office of The Iron Age, 83 Reade St., N. Y. TABLE CUTLERY.

Cheap! To get bargains out of the \$10,000 worth of Table Cutlery purchased by me at late trade sale of the Cutlery Association send for list of numbers, styles, quantities and quotation.

nd quotation.
W. M. CALDWELL. Hardware Commission, 102 Chambers St., N. Y.

To Manufacturers, &c. FLOWER PINS.

Something new, made of light wire, for the use of florists and others. Patent lately allowed, and offered for sale in whole or part. Specimen card of pins sent for examination, if desired, or for further information address the inventor,

J. H. PLUMMER,

1276 Pacific St., Brooklyn, N. Y.

Trade Report.

Wednesday Evening, Aug. 14, 1878. }
The past week has been one of considerable general activity in the Wall street mar-Money continues very easy, call loans count rate on prime business paper is 3 @

The gold market remains without popular interest, the fluctuations of the premium continuing within limits too narrow to make speculation worth the trouble. This week all the quotations have been 10012@ 100%.
The government bond market has been

active and firm. There is still a great demand for 4 per cents., \$10,000,000 having been sold during the week and an equal amount of 5-20s called. In consequence of the funding operations of the Treasury 5-20s of 1867 and 1868 were lower. Except for Louisiana 7s consols, which declined. State bonds have been steady. Railroad bonds have been quiet with a tendency toward a slight decline.

The stock market has been unsettled and irregular, especially for what are known as Granger" stocks, which have declined within the past few days to the lowest point in the year, notably Northwest and St. Paul. Erie and Union Pacific were the strongest stocks on the list. The principal dealings of the week have been in Northwest, St. Paul, Lake Shore, D. L. & W., and Western We give below the closing quotations of active shares.

The following is a comparison of the New York bank averages for the last two weeks:

The foreign trade movements for the week are shown in the following tables:

IMPORTS, For week ended Aug. 10:

Total for week. \$5.76.715 \$5.040.949 \$5.838.638 Prev. reported. 179.753.992 203.474.093 169.725.908

at me	r-
OWS:	
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- 09	3
1,83	9
020	9
3,031	
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9,034	t
1,299	83
00,709	-
094	g
04,092	W
2,050	721
	ows : Value \$3,86

EXPORTS, EXCLUSIVE OF SPECIE. For week ended Aug. 13:

- cporteu	154,920,365	1877. \$4,464,345 160,410,808	\$6,636,77 203,236,68
Total for the	ded Aug.	IO;	\$209,933,42
Total since In-			47/1931
Total since Jan. 1, Same time in 1877 Same time in 1876 Same time in 1876			\$9.384,903

Government bonds were strong and active throughout and closed at the highest prices of the day. We quote:

A		- 1
U. S. Currency 6's. Bid U. S. 6's 1831 registered. 1197 U. S. 6's 1881 coupon. 1075	Aches	. 1
U. S. 6's 1881 registered 1103	Asked	· I
U. S. 6's 1881 coupon	1073/4	1
		1 -
U. S. 6's 1865 cou 1021/2 U. S. 6's 1867 reg 1021/2	. 1025	1 2
U. S. 6's 1867 reg		2 2
U. S. 6'8 -969 COU	1051/4	02
	1051/8	2
U. D. Forto Born	108	02
	108	102
	1065/8	1
U. S. 5's 1831 registered	10638	1
	10638	1
U. S. 4/2 's 1891 coupon	104	
U. S. 4's 1907 registered	105	
U. S. 4's 1907 registered	IOI	
	ioi	
The following were the closing que of active shares:	otations	3
Atlantic and p		-
Atlantic and Pacific Telegraph. Chicago and Northwest. 35½ Chicago, Rock Island and Pacific 65% Chicago, Rock Island and Pacific 65%	26	
	3536	
Chicago, Rock Island and Pacific 1334 Chicago, Bur. and Quincy	6534	
	11418	
	1111/2	00
	4	Xo:
Cleveland and Pittsburgh 23% Chicago and Alton 79½	241/4	002
D	801/2	Koos
Canton Pref. 102 Delaware, Lack, and Western 16 Delaware and Hudson Canal 54	0474	con
	20	Xina
Delaware and Hudson Canal 54 Express—Adams. 511/4	- 2/1	002
Express Adams. 54 American 1041/2	5134	002
American 104½ United States 47	106	2:
	4734	22
	45	023
	90	023
Harlem 17/4 Hanibal and St. Joseph 138 Hanibal and St. Joseph 11/6 Illinois Central Pref 20/6 Kanso Central 17/6	171/2	924
	139	024
Illinois Central Pref. 291/8 Kansas and Texas 841/4	291/2	024
Kansas and Texas. 8414 Lake Shore 236	85	024
Michigan Commission 238	-1/	0247
Lake Shore 2½ Michigan Central 64½ Morris and Essex 65½		0251
Milwaukee and St. D		507
Suchigan Central 64½	8334	508
New Jersey Central Pref. 30% New Jersey Southern 341/2	681/8	520
New Jersey Southern 3412	0028	121
Pacific M. Scissippi.	136	752
Pacific Mail 71/2 anama 161/4	734	752
Pittsburgh and F	161/2	753
Panama. 16% Pittsburgh and Fort Wayne 126 Quicksilver 94 Louis Kansas City Northern 30%	1261/2	7535 754
Pref 121/2	95	352
t. Louis Kansas City Northern. 3012 90ledo, Wabash & Western. Pref. 2016	372	253%
olode my	41/2	54 1/2
nion Pacific Western	22	55
	1378 0	551/2
cockraph	9	56
****	y . /4 9	561/2

GENERAL HARDWARE.

There are a good many buyers in the city from the West and South, and although the orders which are being placed are generally reported light, there is, beyond a doubt, considerable improvement in the demand for goods over the previous week.

On Wednesday next, 21st inst., the auction sale of Screws by the American Screw Co., being easy to negotiate at 1 @ 2 %. The distake place. There is no abatement of interest in the result of this sale, and a large attendance is expected; in the mean time, although Screws are being offered at prices which are generally conceded to be below the cost of production, we hear of no speculative demand, and this branch of the Hardware business is unusually quiet for the season, and will remain so until the decisive action of Wednesday next lends its aid to settle the vexed question of value. Full particulars regarding the auction sale will be found in the advertisement of the American Screw Company on page 17. We have received the following letter, in reply to one which appeared in our columns last

PROVIDENCE, R. I., Aug. 12, 1378,
To the Editor of the Iron Age.—Dear Sir:
In reply to the inquiry of the Russell &
Erwin Mfg. Co., in your issue of Aug. 8, we
beg to say that it is our intention to offer at
the proposed sale on the 21st inst. our new
pattern Screw, patented May 30, 1876, and
that the sale is not intended to clear out any
old stock whatever, our goods of earlier

that the sale is not intended to clear out any old stock whatever, our goods of earlier manufacture than those mentioned having been disposed of long since, with possibly a few exceptions, principally small sizes.

With this information in hand, we hope that the Russell & Erwin Mfg. Co. will buy liberally at the proposed sale, as they can without doubt make more money in that tway than by manufacturing at 70 per cent. without doubt make more money in that way than by manufacturing at 70 per cent. discount. To remove any obstacle to their so doing, we will guarantee, in their case at any rate, that any purchases they may make shall be supplied entirely with the improved Screw if desired. Respectfully yours,

AMERICAN SCREW CO.,

A. G. ANGELL ACCENT.

A. G. ANGELL, Agent. The following joint letter of the Russell & Erwin Mfg. Co. and the Union Steel Screw Co. explains itself:

New York, Aug. 11, 1878. (Of Cleveland, O.)
George W. Bruce, No. 1 Platt street, has issued the annexed circular.

Office of the ATLANTIC SCREW WORES, May York, Aug. 9, 1878.

The ingenuity of parties in the Screw trade invents so many cock-and-bull stories that the subscriber fears his friends may suppose him a defunct victim of their boasted creatness, and therefore assures them that greatness, and therefore assures them that, while declining all connection with other makers, he continues to supply his customers

Respectfully yours,
George W. Bruce,
No. 1 Platt street. The improved demand for Nails noticed last week continues. Prices remain low and in buyers' favor. We quote Iod. to 6od., \$2.25 net, in small lots; for orders of 50

kegs and over this price would be shaded. Mallory, Wheeler & Co. will issue to-morrow the following memorandum of changes in prices of Locks and Knobs and additions to their former list:

	as follows, subject	r condensed list to our regular disc Knobs.	of July,
No.			
216.		A100	Per doz.
		252	
238	1.50		
	1.50		T.50
	Door	Locks.	1.30
No.	Per doz.	41	
01	14 \$3.50	No. P	er doz.
Kor	3.00	Feel Contractor	& doz.
or		993	\$45.00
Xor		9931/2	4
100			
100		9941/2	3.10
Xoor		995	4.50 8
70		996	4-75
71	******** 23.00	997	5-75
071	******* 14.50	998	6.50 h
100	****** IO.50	998	8.50
whi	*** ****** 11.00 *	999	c co 0

7.75 3.75 3.50 4.50 5.25 4.75

George N. Pierce & Co., Buffalo, N. Y., 28,00 full line of them of new and improved pating net prices: "Gem" Coal Hods.

Add to our list as follows:

Sparks' "Reversible Horizontal Rim Knob Locks. Sparks' "Reversible Horizontal Rim Knob Locks.
5-16 inch Hub. Per doz.
No. 0231, 5 in., Brass Bolts and Key, with
Lever Stop to Latch. \$7,50
Bright Finished Iron Key.
No. 0233, 6 in., Brass Bolts and Key, with
No. 0233, 6 in., Brass Bolts and Key, with
No. 0233, 6 in., same as No. 0233, but with
No. 0233, 6 in., same as No. 0233, but with
Sright Finished Iron Key.
No. 0243, 5 in., Iron Bolts and Thumb Bolt,
No. 0231, 5 in., Iron Bolts and Thumb Bolt,
No. 0231, 5 in., Iron Bolts and Thumb Bolt,
No. 0251, 5 in., Iron Bolts and Thumb Bolt,
No. 0251, 5 in., Iron Bolts and Thumb Bolt,
No. 0251, 5 in., Iron Bolts and Thumb Bolt,
No. 0251, 5 in., Iron Bolts and Thumb Bolt,
No. 0251, 5 in., Same as No. 0250. O'Ross Key O. Kozst, 5 in., same as No. 0251, but with Bright Finished Iron Key O. 0255, 5 in., Brass Bolts and Thumb Bolt, Brass Key 7.50 Brass Key.

O. Ko235, 5 in., same as No. o235, but with Rright Finished from Key.

Oc. o235, 6 in. Fron Bolts and Thumb Bolts.

Tinned Maileable fron Key.

O. o235, 6 in., fron Bolts and Thumb Bolts.

Brass Key. 8.50 6.50 Brass Key
No. Xo253\(^1/2\)6 in. same as No. 0253\(^1/2\)6, but with
No. 037, 6 in. Brass Rey
No. Xo237, 6 in. same as No. 0237, but with
Sprays Rey
No. Xo237, 6 in. same as No. 0237, but with
Sprays Rey
No. Xo237, 6 in. same as No. 0237, but with
Sprays Rev
Spray

MALLORY, WHEELER & Co.

have reduced their prices for Boardman's Du Pont Rifle, FFg and FFFg, in kegs of 6% than the Boardman Staple, as all other ser-

Deep Stamped Ware	Dig. per cont
Deep Stamped Ware	Per Celli
Diamond Ware Tinners' Trimmings (pages 37	
Tinners' Trimming.	
" " " " " " pages 37	to 42)
Tinners' Trimmings (pages 37	to 42)
Planished "	40
Japannod o """	50
Chenadone	3339
Change list on Nickel-plated Clows: Small, \$24; Large, \$:	
lowe . C. On Nickel-plated C	11gpa d
lows: Small, \$24; Large, \$3 Toilet Ware at the follow	aspauores as fol-
Toilet Ware at the fall	
	my net Drices.
Nos. 6, 7, 8 and 9	Don C.
60 70 8	rer set.
11 /0, 00 and 00	31.50

5.0, 7, 5 and 90.

60, 70, 80 and 90.

10, 11, 25 and 33.

10, 130, 140 and 150.

202, 205 and 210 to 218 (inclusive).

103, 105, 200 and 204.

The list of April, 1877, referred to above, is the same as the "Combination List of August, 1877," and known to the trade generally as the "old list." We adhere to this makers, he continues to supply his customers at private sale with his superior Atlantic Screws as heretofore at current market rates, having improved machinery and a full assortment on hand of both flat and round heads in iron and brass.

Respectfully yours.

August, 1877, and known to the trade generally as the old list, We adhere to this it is the best and most familiar one known to the trade generally assortment on hand of both flat and round heads in iron and brass.

All our goods still retain their high quality and finish.

We have just fitted up new sample and sales rooms, and shall be pleased to have you call on us when in our neigborhood.

Yours very truly,
JOSEPH SCHEIDER & Co.

In Foreign Hardware we hear of a slight improvement in the demand. There are no

him are sold at manufacturers' best prices. He has lately added to his list of agencies the goods of the Beaver Falls Cutlery Co. and Wheeling Hinge Co.

have recently issued an illustrated catalogue of the goods of their manufacture, in which we notice Enameled Bird Cages, Bird Cage Hooks, Fancy and Plain Coal Hods, Toilet Ware and kindred goods, Spark Guards, Fenders and Miscellaneous House Furnishing Goods. In their announcement they say: "We shall constantly produce new goods and styles, which will be illustrated and sent you, with prices attached. Refrigerators.—For the spring trade we shall have complete styles of these necessary articles of new designs. Brass Bird Cages. -Under several new patents we will proceed with Brass Cages, and manufacture a terns." In their advertisement on page 11 they illustrate their Patent "Gem" Coal Hod, which is offered to the trade in three styles, Japanned, Bronze Band and Galvanized. They quote these goods at the follow-

Coal Hods.

Patented September 21, 1875.

Net price list.

Japanned. Bronze Band. Galv'd.

per doz...\$3.75

4.25

4.75

4.75

5.50

6.25

They also manufacture the "Boss" Fun-furnace, but no sales are reported.

00	Net Price List,
0	Japan d. 16 inches, per doz. \$4.25 inches, per doz. \$4.25 inches, per doz. \$5.00 inches, per doz. \$1.00 inches, pe
0	We print 1.1 7.25 7.75 0.00
4	Laffin & Rand Powder Co., under dates of
1	Prices for the City of New Year

Prices for the City of New York of all kinds Ganpowder manufactured by E. I. Du Pont de Nemours & Co., Wilmington, Del.

Keg Powder, MALLORY, WHEELER & Co.
The Hardware Board of Trade have called a meeting of the creditors of Prentice & Wiley, Detroit, Mich., to be held at their rooms, Nos 4 and 6 Warren street, on Thursday, the 15th inst. at 2 p. m. Eagle Rifle Shooting, in Kegs, 6¼ lbs., Blue Thursday, the 15th inst., at 3 p. m.

The Hart, Bliven & Mead Manufacturing Company, 107 Chambers street, New York, have reduced their viscos for Residuants. and consumers against buying any other than the Boardman Staple, as all other sertated staples are infringements of the patent, and render the buyer, as well as the maker, liable to suit for damages. The list and discount for these goods will be found in our prices current on page 30.

Joseph Scheider & Co., Nos. 58 and 60 Beekman street, have issued the following discount sheet:

New York, August 15, 1872.

DEAR SIR: We take pleasure in quoting you the following very low discounts from our list of April, 1877:

Deep Stamped Ware.

Dis. per cent. Common Ware.

DIP ONT Fig. and FFF, in canisters of 1.62 ibs. 5.63 and 5.15 ibs. 5.63 and 5.15 ibs. 6.63 and 6.64 ibs. 4. F. & Co., F. FF and FFF, Golden Phea. 5.15 and 5.15 ibs. 6.63 and 6.64 ibs. 4. F. & Co., F. FF and FFF, Golden Phea. 5.15 and 6.65 ibs. 6.64 ibs. 6.65 ibs.

F. L. KNEELAND. P. L. KNEELAND.
Office, 70 WALL St., New York, Aug. 12, 1878.
Trade Prices for Gunpowder Manufactured by
Laffin & Rand Powder Company. New YORK, 26 Murray street, Aug. 10, 1878. Orange Rifle, CG, FG, FFG, FFFG, Kegs, 25 Orange Riffe, CG, FG, FFG, FFFG, Kegs, 12/2 lbs.

lbs... Orange Rifle, CG, FG, FFFG, FFFG, Kegs, 61/4 lbs... New York Sporting, Kegs, 25 lbs... Creedmoor Orange Ducking, "Gold Band," Kegs, 6½ lbs. Meal and Dust, Kegs, 25 lbs. Fourth of July

Fourth of July 25 5.65
Shipping 25 5.15
Shipping 25 5.15
Blasting and Mining (A) CC, C, F, FF, FFF,
Elasting and Mining (B) C, F, FF, FFFF,
Elasting and Mining (B) C, F, FF, FFFF,
Cannon and Musket, U, S, Standard, in Kegs
and Barrels.

Canister Powder.

I b. Canisters, in Cases of 24 each; ½ lb. Canisters, in Cases of 24 each.

Orange Lightning, Nos. 1 to 7, Canisters, 1 lb. \$1.04

Bucking, Nos. 1 to 7, Canisters, 1 lb. \$1.04

Rifle, FFG, FFFG 1 7, 74

New York Sporting 1 4, 44

New York Sporting Fourth of July (Round)

C. E. Jennings & Co., No. 98 Chambers tree street, have issued an illustrated catalogue of their hardware specialties. The book contains 40 pages, in which are shown a large assortment of Augers and Bits, and

vertisement, represents a large number of Knives; Smith & Collins, proprietors of first-class manufacturing establishments. He ley Hardware Co., manufacturers of Paine's Patent Solid Head Auger and Machine Bits; ratent Sond Head Auger and Machine Bits also office of and agents for H. H. Mayhew also office of and agents for H. H. Mayhew & Co., manufacturers of Shepardson's Double Cut Gimlet Bits, &c.; Phillips Manufacturing Co., manufacturers of Phillips' Patent Boring Machines; Benjamin Pierce, manufacturer of Auger Bits and Car Bits; C. L. Jeffords, manufacturer of Augar and Hatch. Jeffords, manufacturer of Axes and Hatchets: Newcomb Brothers, manufacturers of

The Enterprise Manufacturing Company have just got out (to serve as a show card) an elegant colored lithograph giving an excellent view of Philadelphia, with the works of the company as a foreground. lower portion of the picture gives an interior view of the company's show rooms, including illustrations of the various articles of their manufacture. At the foot there is also a price list of their specialties, so that at a glance may be seen the works of the company, the articles manufactured by them and the prices thereof.

The failure of R. W. Booth & Co., Hardware merchants, Cincinnati, Ohio, is announced.

IRON.

American Pig.-The condition of the market is as dull and unsatisfactory, from a manufacturer's standpoint, as we have ever seen it. Some sales have been made during the week of Lehigh Iron, aggregating about goo tons, on private terms. We hear of

They also manufacture the Boss runnel Coal Hod, which they claim is the most perfect funnel Hod on the market. The list Foundry, No. 2, \$15.50 @ \$18; Foundry, No. 2, \$15.50 @ \$17; Gray Forge, \$14.50 @ \$16.

Scotch Pig.- The market for Scotch Iron remains dull and neglected, and no sales of any magnitude are reported. Such business as there is is only in a retail way. No arrivals have been reported since our last writing. Late advices state that the stocks of Scotch Pig in stere in Glasgow at the present time amount to 185,902 tons, against 149,990 tons same time last year. The furnaces in blast this year are 96, against 107 in 1877. We quote as before: Glengarnock. \$23.75; Eglinton, \$22.75, and Coltness, \$24. Rails,—The only transaction reported is

the sale of 1000 tons Iron Rails on private terms. We quote: Steel at mill, \$43 @ \$44. and Iron, according to quality, terms, &c., Old Rails.—We hear of a sale of 300 tons

40 Old Rails, at \$17.50, here. We quote: \$17

Scrap. We quote: No. 1 Wrought, from yard, \$20 @ \$21, nominally.

METALS.

METALN.

Copper,—The market has been very quiet, sales not exceeding 150,000 pounds Lake Saperior at 16¢ @ 164¢. Baltimore we quote 165¢, nominally. Nothing has transpired in futures, there being meither buyers nor England. Mail accounts have readed us from London to the 3d inst., embracing the statistics of Aug. 1, when the visible supply in England and France was 450, 107, against 34,513 on Aug. 1, 1877, 31,803 in 1876, 20,704 in 1875 and 2,001 in 1874. The price of Chili Bars was £61, 107, against £60 in 1877. £72 in 1876, 270 in 1875 and £76 in 1874. The price of Chili Bars was £61, 107, against £60 in 1877. £72 in 1876, 170 in 1877. The visible supply has been steadily on the increase, and is now years past, fully accounting for the extreme prostration observable. Manufactured Copper is only in moderate demand at the combination rates, which remain unchanged. English Yellow Sheathing Copper, 26¢; Braziers, 28¢, and Bolts, 25¢. American yeliow Sheathing Copper, 26¢; Praziers, 28¢, and Bolts, 25¢. American Yellow Sheathing Metal 134¢ @ 14¢. Braziers, 28¢, and Bolts, 25¢. American Yellow Sheathing Metal 134¢, currency, in bond. Mut is very dull. American is still be a seen of sales at 134¢ @ 14¢. Braziers, 28¢, and Bolts, 25¢. American Yellow Sheathing Metal 134¢, currency, in bond. Thi.—The market remains inactive. About 500 slabs Straits were sold since our last at 134¢, gold, but for lots affoat parties are unwilling to pay over 134¢ @ 134¢, gold, but for lots affoat parties are unwilling to pay over 134¢ @ 134¢, gold, we quote the market as follows: English Refined, 14¢ @ 14¢, straits, nominally, 134¢ @ 14¢; English Refined, 14¢ @ 14¢, gold, but for lots affoat parties are unwilling to pay over 134¢ @ 134¢, gold, but we does not over the month price and proven the 15th inst. from Singapore and Penang markets have decided to 315 and 317, 50 do 145 and 317, changes in values to report. As an evidence of the continued popularity of John Wilson's well-known brand of Butcher Knives and Steels, we copy the following from a letter from him dated 2d inst.: "Notwithstanding the great and general depression in trade, our sales of Butchers' Knives and Steels in the U. S. are larger than ever."

We invite attention to the advertisement of Arthur Emory, Baltimore, Md., on page 18. Mr. Emory, as will be seen by the adisparation of P. Merrill's Chisels and Drawing Knives and Steels in St. Mr. Emory, as will be seen by the adisparation of P. Merrill's Chisels and Drawing Knives: Smith & Collins, proprietors of Elmira Nobles prietor of P. Merrill's Chisels and Drawing Knives: Smith & Collins, proprietors of Elmira Nobles prietor of P. Merrill's Chisels and Drawing Knives: Smith & Collins, proprietors of Elmira Nobles prietor of P. Merrill's Chisels and Drawing Knives: Smith & Collins, proprietors of Elmira Nobles prietor of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Smith & Collins, proprietors of Elmira Nobles prietor of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chisels and Drawing Knives: Conn. Valuation of P. Merrill's Chis altogether too large for the very limited demand, and holders accordingly are weak and had from several makers at 14 6d, but se

good brands may be obtained from second good brands may hands at 14.

Lead.—Of common Domestic, 200 tons sold at 3½\$\psi\$, currency. The market closes very firm, with 3¼\$\psi\$, currency, generally asked. The European market is not as firm as it has been; in Eugland, Lead asked. The European market is not as firm any more as it has been; in England, Lead has receded 2/6, and at Hamburg it is, by latest advices, also procurable very much cheaper than in July. There is no change in manufacturers' prices, and we quote Bar 5¢; Pipe, 5¢; Sheet, 6¢; Tin-lined Pipe, 12¢. No. I Solder, 8½, all less 10¢ to the trade. Spelter and Zinc.—The market here remains as strong as ever at 475¢ @ 5½¢, currency, for Common Domestic. Europe is quiet and easier. Sheet Zinc.—The market is quiet, and prices nominal. We quote:

quiet and easier. Sneet Zinc.—The market is quiet, and prices nominal. We quote Domestic, 618¢ @ 64¢, currency, and Mos selman, 78¢ @ 78¢, gold.

Nickel.—The same steadiness previously Aickel.—The same steadiness previously alluded to is still noticeable at \$1.10 @ \$1.25 P ib. Later accounts have reached us from New Caledonia, where the rebellion of the natives has been easily suppressed by the French soldiers.

rench soldiers.

Antimony.—The London market remains rm. Hallet is worth £49, and Cookson, 52. There is a moderate demand here at 120 @ 1240, gold, as to brand.

COAL.

The Coal trade for the present week presents no features of interest whatever. Business, as reported by the companies and 2,50 Glendon Forge being offered at \$14.50 at the merchants, is very dull, although a fe

report a slight increase in the number of inquiries for Coal. Freights are somewhat scarce, which delays shipments, somewhat scarce, which delays shipments, though not to any very serious extent. Consumers have not been so much frightened as was anticipated by some, and are still buying from hand to mouth. There is very little demand for the smaller sizes. Lebigh steam sizes are not abundant, although the market is not bare of this Coal. In the smaller sizes there is a little drag, wring to the fact, that there is no domestic. owing to the fact that there is no domestic demand, and manufacturers cannot take all that necessarily comes down. Rumors of strikes are in circulation, but so far as we can learn there is more desire on the part of the operators for a strike than on that of the

EXPORTS

Of Hardware, Iron, Machinery, Metals, &c., from the Port of New York, for the

&c., from the	Port	of New York, fo	or the
Week ending	Aug.	13, 1878.	
		Quan.	Value.
Hamburg.			\$ 320
Lea belt'g, bls 11	Value.	Pumps, pkgs 4	1 100
Lea belt'g, bis 11	\$2,731 122		1 100
O'ge mtls., pgs	6,327		490
Sew, mach, cs. 270 Nails, kegs	111	Porto Rice	
Ag. imp., pkgs 11	784	Mach'y, cs 6	
Pumps case. 1	0.0		-31
Hdw., cs 124 Mach y, pkgs. 641 Copper, cks 63	1,505	Sew. mach., cs 1	
Mach'y, pkgs. 641	9,485	Hdw., es 14	
Copper, cks o3	12,800	Hdw., es 14 Nails, kegs 40	
London.		Mf. iron, pkgs. 5	III
Sew. mach., cs 479	6,855	Venezuela	
Hdw., cs 95 Plt'd w're, cs. 18 Copper, cks 135	4,849	Borolyons on	
Pit'd w're, os. 18	2,505	Mach'y, cs	0.00
Copper, cks 135	28,700	Tinware, cs	
Mf. iron, pkgs 52 Lea, belt., cs. 3 Pumps, pkgs. 12	370	Tampo, page. I	95
Pumpa pkgs. 19	1,400 260	Iron safe	100
Mach'y, cs 10	2,950	Hdw., cs 8s Cartridges, cs 8	
		Mf. iron, pkgs. 9 Tinw're, cs 2 Spikes, kegs. 10	
Bremen.		Tinw're, cs	
Ag. imp., pkgs 10	580	Spikes, kegs 10	
Ag. imp., pkgs 10 Mach'y, cs 1 Burners, cs 9	300	French West In	
Belting, cs	413		
Hdw., cs 1		Pl'd ware, cs. 1	93
Gas fixt., cs 15		Hayti.	
Rotterdam		Sew. mach., cs 3	196
		Nails bys y	
Copper, cks 82 Mach'y., cs I	16,110	Pumps, pkgs. 1 Mf. iron, pkgs. 3	51
Mf. iron, pkgs. 9	100	Anchore	87
Ditid w're on v	848	Anchors 2 Iron safe 1	
Ag. imp., pkgs at	1,473	Nails, kegs 15	39
Ag. imp., pkgs 21 Pumps, pkgs. 15 Hdw., pkgs 63	1,000		
нам., рквв 03	1,203	Dutch West In	ares.
Antwerp.		Mf. iron, pkgs 1	50
Ag. imp, pkgs. 4	290	Brasil.	
Hdw., 08 1	75		
		Wire, pkgs 734 Ag. imp., pkgs 58	7,897
Hull.		Ag. imp., pkgs 58 Cutlery, cs 83	895 x,8x8
Hdw., pkgs 446 Ag. imp., cs 2 Mach'y, pkgs. 10	8,506	Rifles, cs 2 Barrows, pgs 388	320
Mach's ples to	143 448	Barrows, pgs., 388	570
			270
Liverpool.		Durners, Cs 2	
Pit'd w're, cs. 2	950	Revolvers, cs. 1	
Hdw., 08 901	8,694	Irons, cs so	300
Wringers, ca. 16	480	Irons, cs so	3,777
Wringers, cs. 16 Mach'y, cs. 1 Refrie'rs, pgs. 1	480 208	Irons, cs so	3,777 9,654 335
Hdw., cs sor Wringers, cs if Mach y, cs i Refrig'rs, pgs. 3 Ag. imp., pkgs so	480 208 150	Hdw., pkgs 207 Mach'y, pkgs. 102 Pumps, pkgs. 4 Cartridges, cs. 1	3,777 9,654 335
Hdw., cs sor Wringers, cs 16 Mach'y, cs 16 Refrig'rs, pgs. 3 Ag, imp., pkgs 20 Mf, iron, pkgs 16	480 208	Hons, cs. 50 Hdw., pkgs. 207 Mach'y, pkgs. 102 Pumps, pkgs. 4 Cartridges, cs. 10 Tacks, cs. 10	3,777 9,654 335 50 158
Mf. iron, pkgs 16	480 208 150 300	Irons, cs 50 Hdw., pkgs 207 Mach y, pkgs . 102 Pumps, pkgs. 4 Cartridges, cs 1 Tacks, cs 10 Sew. mach., cs 181	3,777 9,654 335 50 158 3,842
Mf. iron, pkgs 16 Glasgow.	480 208 150 300 113	Irons, cs	3,777 9,654 335 50 158 3,842 578
Mf. iron, pkgs 16 Glasgow. Lea. belt'g, cs 1	480 208 150 300 113	Irons, cs	3,777 9,654 335 50 158 3,842 578
Mf. iron, pkgs 16 Glasgow. Lea. belt'g, cs 1 Hdw., cs 27	480 208 150 300 113	Hrons, cs 50 Hdw., pkgs 207 Mach'y, pkgs. 102 Pumps, pkgs. 4 Cartridges, cs 10 Sew. mach., cs 10 Sew. mach., cs. 151 Mf. iron, pkgs 35 United States of tombia.	3,777 9,654 335 50 158 3,842 578
Mf. iron, pkgs 16 Glasgow. Lea. belt'g, cs 1 Hdw., cs 27 Havre.	480 208 150 300 113 360 775	Hrons, cs 50 Hdw., pkgs	3,777 9,654 335 50 158 3,842 578 f Co-
Mf. iron, pkgs 16 Glasgow. Lea. belt'g, cs 1 Hdw., cs 27 Havre. Sew. mach., cs 2	480 208 150 300 113 360 775	Hrons, cs 50 Hdw., pkgs	3,777 9,654 335 50 158 3,842 578 f Co-
Mf. iron, pkgs 16 Glasgow. Lea. belt'g, cs 1 Hdw., cs 27 Havre. Sew. mach., cs 2	480 208 150 300 113 360 775	Hrons, cs 50 Hdw., pkgs	3,777 9,654 335 50 158 3,842 578 f Co-
Mf. iron, pkgs 16 Glasgow. Lea. belt'g, cs 1 Hdw., cs 27 Havre. Sew. mach., cs 2 Oopper, bbls. 167 Pk'd ware. cs. 3	480 208 150 300 113 360 775 81 36,300 190	Irons, cs	3,777 9,654 335 50 158 3,842 578 f Co- 50 150 127 943
Mf. iron, pkgs 16 Glasgow. Lea. belt'g, cs 1 Hdw., cs 27 Havre. Sew. mach., cs 2 Oopper, bbls. 167 Pk'd ware. cs. 3	480 208 150 300 113 360 775 81 36,300 190 799	Irons, cs	3,777 9,654 335 50 158 3,842 578 f Co- 50 150 127 943
Mf. iron, pkgs 16 Glasgow. Lea. belt'g, cs 1 Hdw., cs 27 Havre. Sew. mach., cs 2 Oopper, bbls. 167 Pk'd ware. cs. 3	480 208 150 300 113 360 775 81 36,300 190 709 200	Irons, cs	3,777 9,654 335 50 158 3,842 578 f Co- 50 150 127 943
Mf. iron, pkgs 16 Glasgow. Lea. belt'g, cs 1 Hdw., cs 27 Htwre. Sew. mach., cs 2 Oopper, bbls 167 Pt'd ware. cs. 3 Ag. imp., pkgs 5 Mach'y, cs 1 W. wheels, pgs 6	480 208 150 300 113 360 775 81 36,300 190 799	Irons, cs.	3,777 9,654 335 50 158 3,842 578 f Co- 50 127 943 318 728 4,350 403
Glasgow. Lea. belt'g, cs z Hdw., cs	480 208 150 300 113 360 775 8x 36,300 190 709 200 550 300	Hrons, cs	3,777 9,654 335 50 158 3,842 578 f Co- 50 127 943 318 728 4,350 403
Harre, Sew. mach., cs. 27 Horre. Sew. mach., cs. 27 Hit dware, cs. 3 Ag. imp., pkgs 5 Mach'y, cs. 1 W. wheels, pgs 6 Guns, cs. 4 New Zealand	480 208 150 300 113 360 775 8x 36,300 190 799 200 550 300	Irons, cs	3,777 9,654 335 50 158 3,842 578 f Co- 50 150 127 943 318 728 4,350 403 5,638
Mf. iron, pkgs 16 Glasgow. Lea. belt'g, cs 2 Hdw., cs	480 208 150 300 113 360 775 81 36,300 190 799 200 550 300	Irons, cs. 50 How, pkgs. 507 Mach'y, pkgs. 102 Pumps, pkgs. 4 Cartridges, cs. 1 Tacks, cs 1 Tacks, cs. 1	3,777 9,654 335 50 158 3,842 578 f Co- 50 150 127 943 318 728 4,350 403 5,638 447 146
Glasgow. Lea. belt'g, cs. z Hdw., cs	480 208 150 300 113 360 775 81 36,300 190 799 200 550 300 1.	Irons, cs	3,777 9,654 335 50 158 3,842 578 f Co- 50 150 127 943 318 728 4,350 403 5,638
Harris Market Sew. 164 Market	480 208 150 300 113 360 775 81 36,300 190 799 200 550 300 2. 76,867 160	Irons, cs. 50 Irons, cs. 5	3,777 9,654 335 570 158 3,842 578 f Co- 50 150 127 943 318 728 4,350 403 5,638 447 146 570
Harre, pkgs 16 Glasgow. Lea. belt'g, cs 2 Hdw., cs	480 208 150 300 113 360 775 81 36,300 190 709 200 300 2. 76,867 160	Irons, cs. 50 How, pkgs. 207 Mach'y, pkgs. 207 Mach'y, pkgs. 102 Pumps, pkgs. 4 Cartridges, cs. 1 Tacks, cs 1 Csew. mach., cs. 181 Mf. iron, pkgs. 35 United States of Iombia. Nalls, kegs. 11 Wire, pgs. 2 C'tridges, cs. 3 Sew. ma., pgs. 37 Pi'd w're, cs. 2 Mf. iron, pkgs. 9 Hdw., pkgs. 202 Cutlery, pkgs. 203 Hdw., pkgs. 202 Cutlery, pkgs. 204 Ag. Imp., pkgs. 16 Revolvers, cs. 3	3,777 9,654 3355 50 158 3,842 578 f Co- 50 150 127 943 3188 728 4,350 403 5,638 447 147 150 50 50 50 50 50 50 50 50 50 50 50 50 5
Glasgow. Lea. belt'g, cs. z Hdw., cs 27 Hdw., cs 27 Hdw.re. Sew. mach., cs. 2 Copper, bbls 167 Pit'd ware. cs. 3 Ag. imp., pkgs 5 Mach'y, cs z W. wheels, pg5 6 Chuns, cs 4 New Zealand Ag. imp., pg3, 168 Hdw., cs 6 British North A toan Colonic Coal, tons 1315	480 908 150 300 113 360 775 81 36,300 190 799 200 550 300 1. 76,867 160 100 100 100 100 100 100 100 100 100	Irons, cs. 50 Irons, cs. 5	3,777 9,654 335 570 158 3,842 578 f Co- 50 150 127 943 318 728 4,350 403 5,638 447 146 570
Harre, pkgs 16 Glasgow. Lea. belt'g, cs 2 Hdw., cs	480 208 150 300 113 360 775 81 36,300 190 709 200 300 2. 76,867 160	Hons, cs. 50 Hdw., pkgs. 207 Mach'y, pkgs. 102 Pumps, pkgs. 4 Cartridges, cs. 1 Tacks, cs. 20 Sew. mach., cs 18 H. iron, pkgs 35 United States o lombia. Nails, kegs. 11 Wire, pgs. 2 C'tridges, cs. 3 Sew. ma, pgs 37 Fl'c'd w're, cs. 2 Mf. iron, pkgs 95 Hdw., pkgs. 202 Cutlery, pkgs. 202 Cutlery, pkgs. 24 Pistols, cs. 1 Axles. 24 Ag. imp., pkgs 15 Revolvers, cs. 3 Trieste. Ag. imp., pkgs 19 Bristol. 2	3,777 9,654 3355 50 158 3,842 578 f Co- 50 150 127 943 3188 728 4,350 403 5,638 447 147 150 50 50 50 50 50 50 50 50 50 50 50 50 5
Glasgow. Lea. belt'g, cs. z Hdw., cs 27 Hdw., cs 27 Hdw.re. Sew. mach., cs. 2 Copper, bbls 167 Pit'd ware. cs. 3 Ag. imp., pkgs 5 Mach'y, cs z W. wheels, pg5 6 Chuns, cs 4 New Zealand Ag. imp., pg3, 168 Hdw., cs 6 British North A toan Colonic Coal, tons 1315	480 908 150 300 113 360 775 81 36,300 190 799 200 550 300 1. 76,867 160 100 100 100 100 100 100 100 100 100	Irons, cs. 50 Irons, cs. 5	3,777 9,654 3355 50 158 3,842 578 f Co- 50 150 127 943 3188 728 4,350 403 5,638 447 147 150 50 50 50 50 50 50 50 50 50 50 50 50 5
Glasgow. Lea. belt'g, cs. 1 Havre. Sew. mach., cs. 2 Copper, bbls. 167 PH'd ware. cs. 3 Ag, imp., pkgs 5 Mach'y, cs 2 W. wheels, pgs 6 Guns, cs 4 New Zealana Ag, imp. pgs. 3168 Hdw., cs 6 Beitish North A 4can Celonic Coal, tons 134 Hdw., cs 4 Japan. Iron safe 1	480 208 150 300 113 360 775 81 36,300 190 799 200 530 2. 76,867 160 300 2. 5,582 79	Hons, cs. 50 Hdw., pkgs. 207 Mach'y, pkgs. 102 Pumps, pkgs. 4 Cartridges, cs. 1 Tacks, cs. 20 Sew. mach., cs 18 H. iron, pkgs 35 United States o lombia. Nails, kegs. 11 Wire, pgs. 2 C'tridges, cs. 3 Sew. ma, pgs 37 Fl'c'd w're, cs. 2 Mf. iron, pkgs 95 Hdw., pkgs. 202 Cutlery, pkgs. 202 Cutlery, pkgs. 24 Pistols, cs. 1 Axles. 24 Ag. imp., pkgs 15 Revolvers, cs. 3 Trieste. Ag. imp., pkgs 19 Bristol. 2	3,777 9,654 3355 50 158 3,842 576 60 150 127 943 318 4,350 403 5,638 447 146 570 512
Harre, pkgs 16 Glasgow. Lea. belt'g, cs 2 Hdw., cs	480 908 150 300 113 360 775 8x 36,300 190 799 200 550 300 1. 76,867 160 200 1. 5,582 79	Irons, cs. 50 How, pkgs. 207 Mach'y, pkgs. 207 Mach'y, pkgs. 102 Pumps, pkgs. 4 Cartridges, cs. 1 Tacks, cs 1 Tacks, cs 1 Sew. mach., cs. 181 Mf. iron, pkgs. 35 United States o lombia. Nalls, kegs. 11 Wire, pgs. 2 C'tridges, cs. 3 Sew. ma., pgs. 37 Pit'daw're, cs. 2 Mf. iron, pkgs. 202 Cutlery, pkgs. 202 Cutlery, pkgs. 202 Cutlery, pkgs. 203 Mach'y, pkgs. 204 Ag. imp., pkgs. 149 Pistols, cs. 1 Axles 24 Ag. imp., pkgs. 3 Trieste. Ag. imp., pkgs. 3 Bristol. Hdw. cs. 5 Mexico. 1	3.779 9.654 333 50 158 3.842 578 6 6 6 6 7 7 9 43 318 43 728 44 330 5 5 6 38 44 77 14 6 570 5 170
Glasgow. Lea. belt'g, cs. 1 Havre. Sew. mach., cs. 2 Copper, bbls. 167 PH'd ware. cs. 3 Ag, imp., pkgs 5 Mach'y, cs 2 W. wheels, pgs 6 Guns, cs 4 New Zealana Ag, imp. pgs. 3168 Hdw., cs 6 Beitish North A 4can Celonic Coal, tons 134 Hdw., cs 4 Japan. Iron safe 1	480 208 150 300 113 360 775 81 36,300 200 200 550 300 1. 76,867 160 160 175,883 79	Irons, cs. 50 How, pkgs. 207 Mach'y, pkgs. 207 Mach'y, pkgs. 102 Pumps, pkgs. 4 Cartridges, cs. 1 Tacks, cs 1 Tacks, cs 1 Sew. mach., cs. 181 Mf. iron, pkgs. 35 United States o lombia. Nalls, kegs. 11 Wire, pgs. 2 C'tridges, cs. 3 Sew. ma., pgs. 37 Pit'daw're, cs. 2 Mf. iron, pkgs. 202 Cutlery, pkgs. 202 Cutlery, pkgs. 202 Cutlery, pkgs. 203 Mach'y, pkgs. 204 Ag. imp., pkgs. 149 Pistols, cs. 1 Axles 24 Ag. imp., pkgs. 3 Trieste. Ag. imp., pkgs. 3 Bristol. Hdw. cs. 5 Mexico. 1	3.779 9.654 333 50 158 3.842 578 6 6 6 6 7 7 9 43 318 43 728 44 330 5 5 6 38 44 77 14 6 570 5 170
Glasgow. Lea. belt'g, cs. 1 Hdw., cs	480 908 150 300 113 360 775 81 36,300 300 250 300 25. 76,867 160 300 25. 55 300 25. 55 58 379 115 185 ddies.	Irons, cs	3-777 9,654 335 50 158 3,842 50 159 150 127 43 3188 4358 4550 550 512 170 221
Ag. inp., pkgs 10 Glasgow. Lea. belt'g, cs 1 Hdw., cs	480 908 150 908 150 908 150 908 150 909 909 900 550 909 160 900 909 160 900 900 900 900 900 900 900 900 900 9	Irons, cs	3-777 9,654 335 50 158 3,842 50 159 150 127 43 3188 4358 4550 550 512 170 221
M. iron, pkgs 10 Glasgow. Lea. belt'g, cs 2 Hdw., cs 27 Hdw.re. Sew. mach., cs 2 Copper, bbls 167 Pit'd ware. cs. 3 Ag. imp., pkgs 5 Mach'y, cs 2 W. wheels, pgs 6 Guns, cs 4 New Zealand Ag. imp., pgs, 3168 Hdw., cs 4 Lean Colonie Coal, tons 1345 Hdw., cs 4 Japan. Iron safe 1 Mi. iron, pkgs 10 British West In Nafls, kegs 12 Sew. mach. cs. 11 Hdw., cs 24	480 908 150 908 150 908 150 908 150 909 900 900 900 900 900 900 900 900 9	Irons, cs	3-777 9,654 335 50 158 3,842 50 159 150 127 43 3188 4358 4550 550 512 170 221
M. iron, pkgs 10 Glasgow. Lea. belt'g, cs 1 Hdw., cs	480 908 150 908 150 300 113 360 775 881 360 775 500 900 900 550 300 8. 76,867 160 8. 55,58a 79 115 185 31 415 33 33	Irons, cs	3-777 9,654 335 50 158 3,842 50 159 150 127 43 3188 4358 4550 550 512 170 221
M. iron, pkgs 16 Glasgow. Lea. belt'g, cs 2 Hdw., cs	480 908 150 908 150 300 113 360 775 81 36,300 190 709 900 550 300 300 300 81 155 185 185 185 185 185 185 185 185	Irons, cs	3-777 9,654 335 50 158 3,842 50 159 150 127 43 3188 4358 4550 550 512 170 221
M. iron, pkgs 10 Glasgow. Lea. belt'g, cs 1 Hdw., cs	480 908 150 908 150 300 113 360 775 881 360 775 500 900 900 550 300 8. 76,867 160 8. 55,58a 79 115 185 31 415 33 33	Irons, cs	3-777 9,654 335 50 158 3,842 50 159 150 127 43 3188 4358 4550 550 512 170 221
M. iron, pkgs 10 Glasgow. Lea. belt'g, cs 2 Hdw., cs 27 Hdw.re. Sew. mach., cs 2 Copper, bbls 167 Pit'd ware, cs 3 Ag, imp., pkgs 5 Mach'y, cs 1 W. wheels, pgs 6 Guns, cs 4 New Zealand Ag, imp., pgs, 3168 Hdw., cs 4 Lean Colonie Coal, tons 1345 Hdw., cs 4 Japan. Iron safe 1 Mi. iron, pkgs 10 British West In Nafls, kegs 12 Sew. mach. cs. 11 Hdw., cs 24 Cutlery, cs 2 Tinware, cs 10	480 208 150 208 150 208 150 208 150 208 150 208 150 208 150 208 208 208 208 208 208 208 208 208 20	Irons, cs	3-777 9,654 335 50 158 3,842 50 159 150 127 43 3188 4358 4550 550 512 170 221
## Ag. Hap., pkgs 16 ## Glasgow. Lea. belt'g, cs 2 Hdw., cs	480 908 150 908 150 300 113 360 775 881 360 775 500 900 900 550 300 8. 76,867 160 8. 55,58a 79 115 185 31 415 33 33	Irons, cs. 50 Irons, cs. 51 Irons, cs. 51 Irons, cs. 52 Irons, cs. 53 Irons, cs. 54 Irons, cs. 54 Irons, cs. 55 Irons, cs. 56 Irons, cs. 57 Irons, cs. 5	3-7779, 9, 654 3-79, 654 3-8, 84 3-8, 84 3-8, 84 3-8, 84 4-73 3-8, 84 4-73 3-8 3-8, 84 4-73 3-8 3-8 3-8 3-8 3-8 3-8 3-8 3-8 3-8 3-
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M. iron, pkgs 10 Glasgow. Lea. belt'g, cs 2 Hdw., cs	480 208 150 208 150 208 150 208 150 208 208 208 208 208 208 208 208 208 20	Irons, cs. 50 Irons, cs. 51 Irons, cs. 52 Irons, cs. 53 Irons, cs. 54 Irons, cs. 54 Irons, cs. 55 Irons, cs. 56 Irons, cs. 56 Irons, cs. 57 Irons, cs. 5	3-7779, 654, 359, 654, 359, 654, 359, 654, 359, 654, 359, 654, 359, 657, 657, 657, 657, 657, 657, 657, 657
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M. iron, pkgs 10 Glasgow. Lea. belt'g, cs 2 Hdw., cs	480 208 150 208 150 208 150 208 150 208 208 208 208 208 208 208 208 208 20	Irons, cs. 50 Irons, cs. 51 Irons, cs. 52 Irons, cs. 53 Irons, cs. 54 Irons, cs. 54 Irons, cs. 55 Irons, cs. 56 Irons, cs. 56 Irons, cs. 57 Irons, cs. 5	3-7779, 654, 359, 654, 359, 654, 359, 654, 359, 654, 359, 654, 359, 657, 657, 657, 657, 657, 657, 657, 657
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Wallach A. & E.
Cases, I
Wolffe A. H.
Windmuller L. & Roe
ker,
Arms, cs., 12 Wiebusch & Hilger Hdw. Co.
Hdw. Co.
Cutlery, hdw. an anvils, pkgs., 281
Order.

Order, Packages, 20 Gun caps, cs., 14 Wads, cs., 10 Oasks, 3 Flies, cks., 7

OLD METALS, PAPER STOCK, &c.

The sales of Old Metals still continue light and quotations remain about the same as last reported. In the Rag and Paper Stock

Brass, light	.07 @
Composition, heavy	.111/2 @
Lead, solid	.021/2 @
Tea Lead	11 .02 @
Zinc	11 ,023/4 @
Pewter, No. 1	** .00 @
Pewter, No. s	.07 @
Wrought Ironp	
Light 40	45 8.00 6
Stove Plate	44 8.00 (b)
Machinery do	11,00 @
Grate Bars	11 3.50 B
The prices current for	
follows:	
Canvas, Linen	per B 3 c. @ 31/2c.
" Cotton No. r	" 3%c. @
Cotton, No. 1	" 116c. @
White, No. 1	
" No. 2	
Seconds	
Mixed, Woolen	
Soft, do	
Gunny bagging	" 3 C. @
Jute butts	" =3/e @
Kentucky bagging	. " 3 C. @
Book Stock	
Newspaper Stock	" 1 C. @ 1%C.
Waste Paper and Scraps	" %c.@
Kentucky Bale Rope	" 4 C. @
Oakum Junk, No. 1	" 4%c. @ 5 c.
No. 2	" 3 C. @
Tarred Shaking	
Grass Rope	" @2%C.
OT DES TROPO	

PHILADELPHIA.

Office of The Iron Age, 220 South Fourth St. PHILADELPHIA, Aug. 13, 1878.

We have to note a slightly improved feelwe have to note a signity improved reli-ing in business during the past few days, and there is again a growing expectation that the fall trade will prove satisfactory both in extent and value. We have occa-sionally some striking evidences of the fact that business is not prostrated in all departments, as, for instance, in the continued growth and expansion of the business of such firms as the Disstons, the Enterprise Mfg. Co., and the American Machine Co. During a visit last week to the establishment of the Enterprise Mfg. Co. this matter was forced upon our attention very strikingly. forced upon our attention very strikingly. In every department we notice increasing activity and continued expansion of business. Dull times are certainly unknown to such firms as above named. The Enterprise Mfg. Co., for instance, have been fairly crowded out of their premises, and have extended from time to time until their establishment has become one of the largest and most important in the vicinity. largest and most important in the vicinity The company have just completed a most substantial three-story building, 114 by 40, which for strength and convenience can scarcely be surpassed. It is to be used for offices and show-rooms, packing and ship-ping goods, and similar purposes. The building is connected with the factory at the second story by a covered tramway, and will enable the firm to utilize a considerable amount of space for manufacturing purposes which has hitherto been required for offices, &c. They have also made a large addition to their yard space for storage purposes, blacksmith shops, &c. These are sub-stantial evidences of progress, and, as we said before, are convincing evidences that the depression and prostration of the past five years has not been without notable exceptions. The American Machine Com-pany also maintain a similar position, their home and foreign trade both showing a steady growth. We understand that the company have just completed a foreign order for 2000 plaiting machines, which appear to be regarded with much favor. They have had to compete with cheaper and inferior goods, but the increasing demand shows that a superior article will always command a trade. In this connection we venture to refer to a conversation we had a day or two ago with Mr. William G. Neilson, who has just returned from Europe, baving gone over to superintend the delivery of the 40 locomotives sold to the Russian government. Mr. Neilson, who is a close observer and competent authority, states that Northern Europe may be made an excellent market for American tools, implements and small machinery. Cheap goods are not wanted, as they are being turned out in Europe at lower prices than they can be manufactured here. First-class goods, however, and articles of real merit are appreciated, and by judicious management may be successfully introduced, and a permanent demand established. Mr. Neilson also states that there appears to be a desire for closer business is as prostrated as at present. Stocks are being reduced very rapidly, however, and if the demand is sustained there is no doubt prices will be advanced. In the mean time we quote: Common Sheet, No. 24 to 26, 2.9¢ @ 3¢; No. 27 to 28, 3.1¢ @ 3.1¢; No. 25 to 28, 3.1¢ @ 3.2¢; No. 26 to 28, 5.2¢; No. 25 to 28, 3.4¢ @ 3.2¢; No. 16 to 21, 3.1¢; Best Bloom Sheets, No. 25 to 28, 5.2¢; No. 26 to 28, 5.2¢; No. 26 to 28, 5.2¢; No. 16 to 18, 2.4¢ @ 2.5¢; Refined Plates or Blue Annealed, 5-16 to 18, 2.4¢ @ 3.1¢; Best Bloom, trade. In this connection we venture to refer to a conversation we had a day or two ago with Mr. William G. Neilson, who has ness relations with this country, and that representatives of American firms meet with Ba courtesies on every hand, largely, he believes, in reciprocation of attentions bestowed at the Centennial Exhibition of 1876. In locomotives, on the same authority, we state that in the matter of price the United States ered extremely dull, and the majority of the mills in this vicinity are only part employed. builders can compete with the best firms in Europe, but the cost of transportation at present forbids the anticipation of any permanent business from that quarter. In the matter of production the Baldwin Locomo-tive Works has a capacity equal to the two

largest concerns in Germany In referring to the output of locomotives last week we stated that the estimate for 1878 was 230. We should have said that orders for 230 had already been received during 1878, and at a moderate estimate it is expected that the number turned out this year will be at least 350—a very encouraging increase, as will be seen by referring to last week's remarks on the subject.

Pig Iron.—The market continues dull and inanimate, with prices steady and unchanged. There does not appear to be any important increase in the demand, and buyers are as unwilling as ever to anticipate their future requirements. The transactions of the week, therefore, have been confined to small lots, for which the regular current rates have been obtained. has been no special pressure to realize upon large lots, not that holders are indifferent, but simply that buyers cannot be found un-less at prices which would involve heavy sacrifices on the part of sellers. Notwith-standing the continued depression, limited consumption and discouraging outlook generally, it seems to be the opinion of many of indifferent and waiting for something to the latter. The production in the West is the most experienced men in the trade that

although prices may not advance for be that there will be no important change in since the panic and for some time prior to some time they will decline. At the same time, as we have before said, no one at present ap pears to have sufficient confidence in pears to have sufficient confidence in values to buy in advance of requirements. On the other hand, there seems to be a general disposition to curtail production, and we hear of additional furnaces likely to be blown out until supply and demand are more in proportion than they have been of late. We understand that several furnaces are likely to be blown out and refurnaces are likely to be blown out and re-placed by others to run on Bessemer Iron, for which there is a good demand, and it may be regarded as certain that unless there is an early change in the condition of there is an early change in the condition of the market the output of Anthracite Iron will be largely reduced. We continue our quotations of last week, which, however, may be considered to represent the rates for small lots, say No. 1 Foundry, \$17.50 @ \$18.50; No. 2, Foundry, \$16 @ \$16.50; Gray Forge, \$15 @ \$16; White and Mot-tled, \$13 @ \$14.

Blooms .- The demand is fairly active, but prices are weak, and for large lots, prompt cash payments, concessions have to be made from asking rates, which are as follows: Sunken Scrap Blooms (2464 lb), \$38 @ \$40; Northern Ore Blooms (2240 lb), \$35 @ \$39; best quality Charcoal Billets (2240 lb), for wire and steel purposes, \$58 @ \$60; Bars do., \$62.50 @ \$65; Sheet Iron Blooms, cornered (2464 lb), \$55 @ \$58; Cold-blast Charcoal Plate Blooms, \$51 @ \$53; run-out Anthracite, \$48 @ \$50. but prices are weak, and for large lots, \$48 @ \$50

Muck Bars.-The market is dull and prices nominal at \$29 @ \$32, Philadelphia lelivery, according to quality.

Structural Iron.—There are no features of interest, and no new business of any im-cortance coming on the market. For small lots there is a fair demand, between which and contracts previously taken the mills as a rule continue running on full time. Prices are unchanged, viz.: Angles, 2.2¢ @ 2.4¢; 2.4¢ @ 2.5¢; Beams and Channels 2.7€ @ 2.8€.

Plate and Tank Iron.-The demand during the week has been steadily maintained, and the aggregate of reported transactions are somewhat larger than usual One order for 600 tons has been placed with a mill in this vicinity, and other transactions of some importance may also be noted. There is also a fair demand for small lots, which, in connection with former contracts, keeps the mills actively at work. The ex-cessive heat of last month as well as the usual stoppages for repairs, &c., is shown in diminished offerings as well as a more active demand. This may be only temporary, however, although in the mean time it imparts a more cheerful tone to the trade, and encourages the hope that the movement may become permanent as the season advances. Prices are steady at about the fol-Valices. Frices are steady at about the following figures, viz.: Common Plates, 2.2¢ (@ 2.3¢; Tank Iron, 2.3¢ (@ 2.5¢; C. No. 1, 2.4¢ (@ 2.6¢; Shell Iron, 2.75¢ (@ 2.9¢; Flange Iron, 3.75¢ (@ 4¢; Solid Firebox, 4.85¢ (@ 5¢, and Best Bloom, 5.5¢ (@ 6¢.

Sheet Iron.—The demand continues good and sales have been made of several large lots, with further inquiries and evidence of a strong disposition on the part of buyers to place orders for large amounts when concessions in price can be obtained. Manufac-turers are firm, however, and, as might be expected on an active market, are less anxious for business than they were during the dull times. There is no attempt to force an advance, neither is there any probability of concessions being made at a time when orders are coming in quite as rapidly as they can be filled. The prospect for a large trade this fall seems to be quite encouraging, although it may be somewhat premature to make confident predictions at a time when general business is as prostrated

Bar Iron,-We cannot note any important change in the Bar trade, although in some quarters the demand is said to be more As a rule, business may be considmills in this vicinity are only part employed, with nothing in the immediate future to in dicate early improvement. We understand that car building is being carried on pretty actively, another large order having just been given out by one of the leading trunk The order for axles will probably be secured by a Philadelphia firm, and it is expected that other Iron manufacturers will be benefited indirectly, if not directly. The general demand is very unsatisfactory, how-ever, and prices weak and irregular. It is difficult to give exact quotations, but from 1.5¢ to 2¢ may be considered the extreme figures, price being made according to qual-

Steel Rails.-There is no change to note in the condition of the trade. Buyers seem to have either placed their orders or withdrawn from the market, as inquiries are not nearly so frequent as they were some time At the same time it must be rememago. bered that the majority of the mills have large contracts to fill and can well afford to be indifferent for the present. It was inti-mated, in fact, that some had taken orders reaching too far into the future, and in case of a general improvement in business they would to a great extent have been shut off

it is almost impossible that prices, although if sellers endeavor to se orders for the distant future it is likely that concessions will have to be made. Sales during the week have been confined to small lots at prices varying from \$42 to \$44, at mill, according to section and location.

Iron Rails.-The market is kept alive by us inquiries and occasional sales, but the actual result is not quite up to the seller's expectations. The demand is largely from West, so that the mills in this vicinity are at some disadvantage in point of de-liveries, therefore but few orders have been secured. There is plenty of business to be had, but the terms offered are not such as to attract serious attention. At the same time there is a general feeling that business is looking up, and some reasonably satisfactory orders are expected to be secured in course of a few weeks. Prices are steady at \$32 @ \$34.50, at mills, according to section, terms and deliveries. We hear of sales of 2000 tons Light Rails at \$33 at mills.

Old Rails.-There has been a dull and inactive market since date of our last report, and only a few small lots have changed hands. There are very few Rails on the spot, however, so that parties wanting them for immediate use would probably have to pay full prices. We cannot learn that buyers are urgent either, and a pressure to sell would probably result in reducing prices. Latest sales reported were at \$19 @ \$19.50, but buyers intimate that they can supply themselves at lower prices. We quote the themselves at lower prices. We quote the market quiet and steady at \$18.50 @ \$19.50, according to terms and quality.

Old Car Wheels-Continue very dull, offered at \$16, with sales of a small lot at a lower figure, understood to be about \$15. There is scarcely any demand, and buyers seem to make their own terms.

Scrap Iron-Continues dull and prices weak, although quotations are nominally unchanged, viz.: Wrought, \$20 @ \$22; Cast, \$14 @ \$15; inferior lots are difficult to move

Nails.-The tone of the market has not Nails.—Ine tone of the market has not improved, and \$2.25 for standard quality is difficult to obtain in consequence, it is said, of inferior Nails being offered at \$2.15. Prices are very irregular, and the market is in a most unsatisfactory condition.

PITTSBURGH.

Office of The Iron Age, 77 Fourth Avenue, PITTSBURGH, PA., Aug. 13, 1878.

The most important matter we have to notice is a very decided improvement in the Iron business, and a better and more hopeful feeling prevails in consequence. It has been appearent to those familiar with the Iron trade for some time past that the market, both for the raw article and the products as well, had touched hard pan, but for a time it was impossible to get jobbers and con-sumers to realize it; they had been disap-pointed so many times within the past five years that some of them had begun to think there was no bottom to it. During the past week, however, a number of large orders were placed for finished Irons, and this in turn has stimulated the demand for the raw were placed for missing froms, and this in \$25, cash, at mill. Steel Blooms, \$40, cash, turn has stimulated the demand for the raw old from Rails, in light supply and higher; article, holders of which are now refusing to sell at figures current ten days ago. We predicted not long since that there would be a change some form \$20 @ \$21.50, cash, according to quality. a change some day, unexpectedly, and our prediction has been realized; the very decided improvement has all occurred within a few days, and at a time when least looked for. While a number of least looked for. While a number of additional failures have taken place during in prices the week, no new ones have occurred in Iron circles, and, as stated in my last, it is believed there will be no more. No other branch of business here in Pittsburgh has felt the effects of the panic so keenly, and it is hoped, now that a reaction has set in, that it will continue for a generation at least, as another siege such as we have had since September, 1873, is by no means desirable. There has been a wonderful change in affairs during the time in question. Men who, prior to the panic, lived on the best the land would afford are now bankrupt and cannot pay one cent on the dollar of their liabilities.

Pig Iron.—There is a continued increa ing inquiry, but business is restricted by the views of holders, who are asking an advance of from \$1 @ \$2 \$\text{#} ton on good mill rons, and sales have been made at an advance of 50¢ \$\mathbb{P}\$ ton. At the figures current 30 days ago there would be no difficulty in finding buyers to absorb most of the stock of the character in question in first hands, which is light, as consumers have, as a rule, little or no stock, and then they are apprehensive of a still greater appreciation, hence the disposition to anticipate future wants. To the large falling off in the pro-duction may be attributed the reaction recently, to which reference has been made, and then the very light stock, both in first and second hands, has not been without its influence in the same direction. The market had dragged so long that buyers had become impressed with the belief that there was no ottom to it, and the consequence is many of them have little or no stock, and the would now like to buy at figures they could have bought at a few weeks ago. Sales of have bought at a few weeks ago. Bituminous Coal Smelted at \$18.50, 4 mos. for Gray Forge Red-Short, with some holders refusing to sell below \$19, 4 mos; Foundry quotable at \$18 @ \$20, 4 mos; Coke Irons, \$16.50 @ \$17, 4 mos., for Forge. Very little doing in Charcoal Irons, as they have been supplanted by cheaper Irons. Bessemer Iron also firmer, with considerable inquiry, and it, too, is held higher; the last sales reported were at \$19.50, 4 mos., but it is doubtful whether it could be bought now under \$20, 4 mos., which figure, it is alleged, does not cover cost of production-that is, of a good article.

Manufactured Iron.-There has been considerable activity during the past week, a number of large Western orders having been placed, and, what is still more important and encouraging, at better prices than could have been obtained a month ago. As intimated in our last two or three reports, buyers were would to a great extent have been shut off from advantages in which, under ordinary circumstances, they would have been participants. At present there is very little said on either side, buyers and sellers being alike obliged to accede to the rates demanded by

In the valleys there are but three mills in operation, and there has been a corresponding falling off here and elsewhere: hence the stiffening in the market to which reference has been made. Moreover, as a number of mills have fallen into the hands of their creditors they are not likely to be started up for some time to come; hence the outlook is more favorable to the selling interest, as the production is not likely to be increased much in the near future. Prices may be fairly quoted on a basis of 1.70¢ @ 1.80¢, 60 days, for standard brands, assorted orders, and 1.60¢, 60 days, for poor stock.

Nails.-There has been no important change in the general position of the market during the past week; prices to makers continue very unsatisfactory, affording no margin for profit, and they cannot be advanced and meet competition from other points. Eastern makers have the advantage of Pittsburgh in the matter of labor, which is much less there than here, whereas the is much less there than here, whereas the cost of transportation to Chicago, St. Louis, and other points of distribution in the West, is about the same. If the railroads did not discriminate our Pittsburgh nail makers would still be able to meet competition, but in the present condition of affairs they are not doing any good, while some makers are refusing to sell under \$2.10, 60 days; \$2 appears to be the ruling rate, and it is inappears to be the ruling rate, and it is in-timated that sales have been made as low as \$1.85 and \$1.90 at Wheeling, although it is but proper to state that Wheeling makers deny the charge. It is very generally admitted that there is no margin for profit at \$2 rates, and as but very few of the fac-tories, either here or at Wheeling, are in operation and stocks are light, an advance in the near future is not beyond the range of possibility, but the prospect at the present writing is not very promising.

Horse and Mule Shoes.—There is nothing Horse and Mule Snoes.—There is nothing new to report, business only fair, prices unchanged. We continue to quote: Juniat changed. brand in 100-keg lots at \$3.50 @ \$4.50, cash.

Wrought Iron Pipe.-The demand has een rather better this week, and it is hoped that business this fall will be brisker than it that business this fall will be brisker than it was during the spring and summer. No change in prices. Water and gas pipe, 60 @ 65 off; boiler tubes, 40 off; oil well casing and tubing, net cash.

Steel .- The demand has been more active within the past week or two, and the mills here, with but few exceptions, are pretty well supplied with orders. But few persons outside of the steel business have any idea of its magnitude or the largely increased consumption within the past few years. American Steel has driven the foreign article from our markets, and then, in conarticle from our markets, and then, in consequence of its cheapness, it has supplanted Iron for many purposes. Prices are low and are being shaved very close. Tool Steel, $11 \notin @.13 \notin -mostly$ at $11 \notin @.12 \notin Machinery$ Steel, $5 \notin @.7 \notin ;$ Spring Steel, $6 \notin @.7 \notin ;$ Boiler Plates, $7 \notin @.8 \notin .$

Rails.-Steel Rails steady at \$44, cash, at mill. Rail Ends continue in light supply; in the absence of sales, may be quoted at \$28, cash, at mill. Steel Blooms, \$40, cash.

Scrap.-The market continues rather quiet, and presents no new or important features that we can hear of with the ex-ception, possibly, of a firmer feeling, in sympathy with Pig Iron. No quotable

1	No. 1 Wrought Scrap, net ton\$21.00 @	
	Ramfold Frack Scrap, net ton 18.00 @	
	Boiler Iron cut, net ton 22.00 @	
8	Cut Borings, gross ton 9.50 @	30.
	Car Axles, net ton	
	Car Wheels, gross ton 18.00 @	
	Car Metal, gross ton 14.00 @	
	Stove Metal, gross ton 9.00 @	
	Buggy Springs, net ton 30.00 @	
	Alass For most kinds of class they	o h

been an increased demand during the past week; manufacturers of fruit jars have had about all they could do all summer, and for Lamp Chimneys, Bottles, &c., there is a very fair inquiry. Window Glass, however, continues quiet, but an increased demand is looked for next month; no change in

CHATTANOOGA.

Office of The Iron Age, Market and 8th Sts., CHATTANOOGA, Aug. 13, 1878.

August is usually considered the dullest of months in all lines of business. It is not so in this district this year. General trade, so far, has been decidedly better than during Mer hants are pus old stocks at whatever they will bring, hope-fully preparing for the fall trade, which they anticipate will be of larger volume and more profitable than trade was last fall. Of course the Iron business sympathizes with the generally improved tone. Dealers and mill men say business has been better with them the past week than it has for any corres-ponding period for three months; stocks of metal are being reduced by the freer metal are being reduced by the freer ourchases for investment. If furnace men do not materially increase the product soon there must be a considerable advance before winter, provided always that the present de-mand holds out and the market goes on im-

Pig Iron.-We make no change in last week's quotations, though the market is de-cidedly more active. Stocks are pretty well worked down, and holders are firmer in their views, and have no disposition to metal on the market. We quote: metal on the market. We quote: Coke Irons, No. 1 Foundry, \$17 @ \$18; No. 2, \$15 @ \$16; Gray Forge, \$13 @ \$14; White and Mottled, \$11 @ \$12. Hot Blast Charcoal—No. 1 Foundry, extra, \$20 @ \$21; do., \$18 @ \$20; No. 2 Foundry, \$16 @ \$18; Gray Forge, \$15 @ \$17; White and Mottled, \$15. Cold Blast Charcoal—Car Wheel Metal, \$22.50 @ \$27.50; do., Extra Standard, \$24.60 @ \$29.50; Forge, \$17.60 @ \$22. metal on the market.

Muck Bar.—\$27 @ \$34; Old Rails, \$17 @ \$17.50. Old Car Wheels, \$18.

Ores.—Brown Hematite, 50 to 56%; \$\varphi\$ ton, \$1.75 @ \$2.25. Red Fossiliferous, 50 to 56%; \$\varphi\$ ton, \$1.70 @ \$1.90. The above prices for ores delivered in Chattanooga on the charteness of the contract of the contrac cars or on the wharf from flat boats._

Nails.—The demand is up to the capacity of the mills, but prices remain unsatisfac-tory, realizing only an exceedingly thin margin of profit to makers. Pittsburg, Wheeling and Steubenville are supplying all the lower Ohio and Mississippi River country at a loss to the mills, and whether there will be any improvement this side of bankruptcy of the entire membership of the Western Nail Association, time only can determine. We quote at \$2.25 rates, though there is no steadiness in the market, and any figure would be only approximate.

Manufactured Iron.-The prices of Bar Manufactured Iron.—The prices of Bar are decidedly firmer than for some time, and mills show a disposition to advance rates, though we should not be justified in changing our figures. The mills are all running full, and have plenty of orders ahead. Raircad supplies are brisk, the demand being quite up to the capacity of the mills. Bar we quote at \$2; Railroad Spikes, \$2.50; Light Bail, \$2.25; Track Bolts, \$3; Trestle Bolts, \$4.

in Chattanooga.

Coal.—We quote run of mine to manufac-turers at \$1.50 @ \$2 per ton on cars at Chat-

BOSTON.

Aug. 10.—Pig continues very dull, spite of the new firmness of some holders. There have been sales of small lots of Pig in this market at \$19 @ \$20 for No 1, \$18 @ \$10 for No. 2. Scotch Pig is quoted at \$23 @ \$25. Gray Forge is nominally quoted at \$17 @ \$18. Nails continue very dull at unchanged prices. Sheet is selling at 3¢ @ 3½¢ \$2 fb. Russia is quiet at 10¾¢ @ 11¢. We quote English Spring Steel at 7¢ @ 8¢, gold; 9¢ @ 11¢ for German; 9¢ @ 11¢ for Machinery; 14¢ @ 15¢ for Cast; 10¢ @ 12¢ for Blister; 8¢ for American Spring; 13¼¢ @ 14¢ for Cast; 9¢ for Blister; and 8¢ for Machinery. In Plate Iron the only activity in this market is in Tank, which is selling steadily at 2¼¢. Boiler Plate is very dull, quoting 2½¢ for No. 1 Charcoal, 2¾¢ for No. 1 Shell, and 3¾¢ for Flange. Copper is extremely quiet and we continue to quote 16¢ @ 16¼¢. For manufactures we quote: New Sheathing, at 24¢ @ 26¢. The outside price rules in small transactions; but large buyers are purchessing at the inside figure. at 24¢@ 26¢. The outside price rules in small transactions; but large buyers are purchasing at the inside figure. Bolts are quoted at 26¢@ 28¢. Yellow Metal Sheathing continues very weak, quoting 13¢ for English and 15¢ for American; Yellow Metal Bolts, 18¢@ 20¢. Lead is firmer and 3½¢ is now obtained in New York for large lots. We quote: Pig, 3½¢@ 3¾¢, currency; Sheet, 6¢; Pipe, 5¢; Tin-Lined Pipe, 12¢; Bar Lead, 5¢; all of these excepting Pig are subject to the usual trade or 10 ½ discount. Antimony is dull and unchanged, with sales of Boston spot lots at 11¼¢@ 11½¢. Spelter continues firm, and prices tend upward, with little disposition on the part of buyers to sell on the spot at part of buyers to sell on the spot at less than 5¢ for 10-ton lots. Tin continues dull and drooping, but prices are unchanged. We quote: Straits, 14¢ @ 14¼¢; Banca, 17¼¢ @ 17¾¢; Refined English, 14½¢ @ 14¾¢, gold. We quote Plate: Charcoal, I. C., \$6 @ \$6.25; Coke, \$5.12½ @ \$5.25; and Terne, \$5.25 @ \$5.50, gold.—Commercial Bulletin mmercial Bulletin.

ST. LOUIS.

Specially reported by Messrs. Spooner & Specially reported by Messrs. SPOONER & COLLINS, Iron Commission Merchants, 217 North Third street, under date of Aug. 8: We have nothing specially new to note in regard to the condition of our market since last report. Trade continues dull and prices remain about the same. Every indication points to a good fall trade. We muote same as last: quote same as last :

	140. 1.	140. 2.	Min.	M't'ld
Missouri Stone Coal	\$22.00	\$21.00	\$10.00	\$17.00
Missouri Charcoal	20,00			
Tenn, Charcoal	20.00			
TOMES CHARGOSEL	20.00	19.00	17.00	20,00
Tenn. Coke, very soft				
and strong	20,00			
Hang. Rock Charcoal Hanging Rock Cold-	24.00	23.00	21.00	30,00
short	23.00 Extra		20,00 B	
Alice and Sarah Hang.				No. 2
Rock Coke			20.00	18.00
Moxahala Blackband	33,00	21,00	20,00	10.00
Ores	23.00	22.00	21,00	19.00
COLD-BLAST CHARC Hanging Rock Tennessee Kentucky Missouri		mos. mos. mos.	\$28,00 25.00 25.00	@ 30.00 @ 30.00 @ 30.00
Georgia		t mos.		@ 30,00
Alabama		mos.		@ 30.00
Assorted Bar Iron				rates
No. 1 Wrought Scrap	9	cwt.		@
Heavy Cast Scrap		. 46	.60	@
			.40	@
Old Rails. 9 ton	4	mos.	19.00	@ 20,00
Old Car Wheels, \$\psi\$ ton		mos.		@ 18.00
				_

RICHMOND.

Mr. Asa SNYDER, Iron Merchant and Furnace Agent, writes as follows under date of August 12: There is still a fair demand for Foundry grades of Pig Iron and more inquiry for Gray Forge. Quotations as below are the basis of sales:

American Scotch Fig fron	22.00 (4)	23.00
Anthracite, No. 1	10.00 6	20.00
No. 2	18.00 @	
No. 3	17.00 @	
" Mottled	14.50 @	
Coke, No. 1	10.00 @	
11 No. 2	18.00 @	
No. 3	16.50 @	
Va. Cold-blast Charcoal, Cold-short	20.00	
Va. " Neutral	27.00 0	
Va. Warm-blast " Cold-short	18.00 @	21.00
Va. " Red-short	17.00 @	18.00
Old Rails	16.00 @	17.00
Wrought Scrap No. 1	17.00 M	
Cast " (machinery)	87.00 (A)	
Richmond Refined Bar Iron	2C. @	
Horse Shoes per keg	4.25 @	
Mule " "	5.50 @	
Old Dominion Nails, Standard Size, 19	3.3. 6	
keg	2.40 @	

Freights to Philadelphia, \$1.40 per ton of 2240 D., by sail.

Freights to New York, \$1.60 per ton of 2240 D. by sail.

BALTIMORE.

Mr. W. N. WYETH, Iron and Steel Mer-Mr. W. N. WYETH, Iron and Steel Merchant, 46 and 48 South Charles street, reports us the following prices, under date of Aug. 12: Trade during the past week has been quiet, but a revival of the same is looked for with the approaching fall. Annexed prices continue firm:

Refined Bar Iron, : to 6 wide by 36					
to r thick	100	. 2-	a	0	0
Refined Bar Iron, 1 to 41/2 wide by	80	1.03	-	-	V
rin to a thick	61	1.85	0	2	e
Refined Sar Iron, 1/4 to 2, Round		-1-3	400	-	4
and Square	0.6	1.85	0	2	6
Hoop iron, 11/4 wide and upward	6.6	216			
Band Iron, from 11/4 to 4 in. wide	66	23%			
Horse-shoe Iron	8.6	3			
Norway Nail Rods	6.5	43/4	0	53	14
Black Diamond Cast Steel, Flats,				-	
Squares and Octagon, ordinary					
sizes	66	13		14	
Machinery Steel	44	8		10	
Cast Spring Steel		6		65	
Homogeneous Steel Plate	66	7		73	
Common Horse Naila		13.	0		
R. R. Spikes, 51/189-16		2/84	0	2%	10
Perkins' Horse shoes, % keg of 100	lbs.			3.6	21/4
Ature snoes					
The transfer of the same of th		8			
Putnam Horse Nails 18 18	19				
	19	20	PT	21	18
Less list discount to the trade.					

ull, and have plenty of orders ahead. Raiload supplies are brisk, the demand being
uite up to the capacity of the mills. Bar we
uote at \$2: Railroad Spikes, \$2.50; Light
lail, \$2.25; Track Bolts, \$3; Trestle Bolts, \$4.

Coke.—We quote at \$2.50 per ton on cars
n Chattanooga.

Messrs. R. C. Hoffman & Co., Iron and
Commission Merchants, No. 23 South Frederick street, report the Pig Iron market as
follows, under date of Aug. 12: Having no
material change to report in the Iron market
for the past week, we continue last quotations via

tions, viz.:	
Baltimore Charcoal Pig	26.00 @ 28.00
Virginia " "	26.00 @ 28.00
Anthracite No. 1	19.00 @ 20.00
11 No. 2	18.00 @ 10.00
No. 3	
" Motiled and White	13.00 @ 14.00
Charcoal, C. B. Blooms	50.00 @ 52.00
" Billets	52.00 @ 55.00
Refined Blooms	43.00 @ 45.00

CINCINNATI.

Messrs. E. L. Harper & Co. (successors to Messrs. L. R. Hull & Co.), under date of Aug. 10, write us as follows: The market has been moderately active during the past week, with a considerably increased move-ment at the close. Prices are becoming more settled and stable and quotations are much more tenaciously adhered to. It is generally believed that bottom has been touched, and that any change will in all probability be for the better, but how soon any noticeable advance will be realized, and how large such an advance will be, are points on which there exist the widest dif-ferences of opinion.

HOT BLAST FOUNDRY.		1
Hanging Rock C. C., No r. C. C., No. 2	21.50 @	22.00
Alice, No. 1 Extra, I. M	21.00 @	
11 No. 1, N. O	10.50 @	
Hanging Rock Coke and S. C., No. 1 S. C., No. 2	19.00 @	
Virginia Coke, No. 1	16.co @	
Shawnee S. C., No. 1	17.00 @	
" S. C., No. 2.	16.50 @	
" S. C., No. 2. Hocking Valley S. C., No. 1. S. C., No. 2.	18.50 @	
PORGE IRONS.	10,00 @	.,
Hanging Rock, No. 1 C. C	19.00 @	
Longdale, No. 1 Coke	17.00 @	
Red-short, No. 1 Coke	18.50 @	
Old Rails, primecash,	18,00 @	
CAR WHEEL AND MALLEABLE	i.	
Hanging Rock C. B	31.00 @	
Southern and Western Brands	30.00 @	

LOUISVILLE.

Messrs. GEO. H. HULL & Co., under date of Aug. 12, write us as follows: The demand for Iron still seems on the increase, but with no disposition on the part of buyers to lay in large stocks. Some furnaces are asking an advance on prices current 30 days ago for their product, but in general the same figures rule. The usual time, 4 months, allowed on quotations below:

FOUNDRY IRONS.

No. 1 Hanging Rock, Charcoal\$20.00 @ 21.00
No. 1 Hanging Rock, Charcoal\$20.00 @ 21.00 No. 2
No. 1 Southern, Charcoal 18.00 @ 19.00
No. 2 " " 16,00 @ 17.00
No. r Hanging Rock, Stonecoal and
Coke 19.00 @ 20.00
No. 2 Hanging Rock, Stonecoal and
Coke 17.00 @ 18.00
No. 1 Southern, Stonecoal and Coke 17.00 @ 18.00
No. 2 16 16.00 @ 17.00
"American Scotch" 17.00 @ 19.00
Silver Gray
MILL IRONS.
No. 1 Charcoal, Cold-short and Neut'l, 16,00 @ 16.50
No. 1 Stonecoal and Coke, Cold-short
and Neutral 16.00 @ 16.50
No. 2 Stonecoal and Coke, Cold-short
and Neutral
No. 1 Missouri and Indiana Red-short. 20.00 @ 21.00
White and Mottled, Cold-short and
Neutral 13.00 @ 14.00
CAR WHERE AND MALL PARTE TRONG

rates of a few weeks ago, and still more so to make any large contract for future delivery at present price. A Plow Steel manufacturer writes that the price of raw material has advanced on him to g within a fortnight. This is healthy, but anything like a general advance would start up idle mills at once and we should soon have a surplus again. Nails are worse than ever, and it seems to be a desperate game of freeze it seems to be a desperate game of freeze out to spite the season and each other that the manufacturers are playing.

FOREIGN.

FRANCE,

(Moniteur des Interets Materiels.)

Second ditto, 39; Manufactures, 45. Spelter is tolerably well upheld in France. We quote Silesian here and at Harre, 46,500 47,55 fnancs the roo kilos. Marseilles is unaltered. They quote Sheet Zinc, 18 06 francs, less 3 %: Remelted, 44; Alquifou, Adra, 43; Maiaga, 30 30,50. Antimony, at Marseilles, 140 francs the roo kilos. Iron.—As regards fron, Paris has formed an exception and has been more active. The steady consumptive demand noticeable of late has exhausted the stocks of dealers. Special Iron is wanted, but Iron for architectural purposes begins to flag. In the Haute Marne rather a decrease is observable in the amount of commands dropping in during the week. Fine Charcoal Iron is rather neglected. In the Muerthe and Moselle Pig Iron is stronger. The supply there has diminished by degrees. The large Iron works in the Loire basin have received some orders of note from the government and railroads. Dealers have, on the other hand, ceased to be in the market. In the Northern Department prices are getting weaker and weaker. The dealers who some time since bought largely in that locality sell little, and make the unpleasant discovery that their stock declines in value from week to week. Blast furnaces in the Ardennes are about as badly off as those at the North Coal.—The Coal companies had in contemplation long since a curtailment of output, but they hesitated to adopt the measure, not wishing to discharge temporarily such a great number of miners. The Anzinstrikers feolishly undertook to do what their employers wished to avoid as long as possible. Yet, as we have intimated above, there is such an accumulation of Coal at the leading centers of France that even the suspension of work at Anzin does not, on the whole, improve values. Thus nobody is benefited by these strikes—least of all the strikers themselves.

Revue Universile).

BRUSRUS, July 37, 1878.—Iron. —We are still waiting for the promised improvement in the Iron trade consequent upon the Eastern settlement. There being no signs of coming orders from the lately beligerent countries except Roumania, it is evident that we shall have to lay aside all sanguinity on the subject and trust in local activity alone. Trade in Germany and France also recovers but slowly in the metallurgical branch, but this is partly due to the usual lull during the mid-summer season, and, so far as Germany is concerned, to some extent to the unsettled state of the public mind. As long as political agitation lasts recovery will be but slow. In Austria and Italy business in metals is also reported to be languid, and this may be attributed in a measure to similar political causes. There is one consolation, however—we mean the tolerably good yield of cereal crops on the Continent, and as money continues easy we see no cause for any serious apprehensions respecting the future. If the general look is not as bright as it was a month since, there is at least no fear of a collision between the leading nations of Western Europe, and trade and industry will soon be in condition for a sound revival. The only country in which the labor question is now reappearing in an ugly shape is France, but we may rely on the energy and popularity of the government and leading men there to bridge over a month or two, when the activity of the fall trade will easily readjust the relations between employers and men. Coal.—Half greasy is in better request at Liege, but in the Mons district every effort is made to reduce the output, stocks accumulating altogether too fast.

HAMBURG, July 27, 1878.—Metals.—Unusual importance attaching to the elections, business has been very nearly paralyzed by the agitation inseparable from the vital questions engaged, and the metal trade, as was to be foreseen, has also suffered from this prolonged interruption, the canvass filing the greater part of the month. Copper has been inactive. The quotatian at Berlin ranges nominally between 69 and 72.50 marks the 50 kilos. This may be quoted here between 70 and 75 marks, nominally, hardly anything having transpired. Berlin and Stettin are unaitered. Lead is the only metal evincing some degree of real strength, although it has also become less brisk. The quotation at Berlin remains 16.30 @ 16.50 marks the 50 kilos. while here and at Stettin there is not enough business doing to base a quotation on. Spelter has relapsed into a very quiet mood, and the speculative operations lately indulged in have led to no further improvement. Berlin quotes 18 @ 18.75, and Breslau 17 @ 18.50 marks the 50 kilos. (Borsenhalle.)

(J. Peet & Co.)

(J. Peet & Co.)

BATAVIA, Java, June 17, 1878.—Metals.—Tin.—
At auction on the 11th inst. 10,396 piculs Billiton
were sold at an average of 41.2; guilders per picul.
Taking freight by steamer to Holland at 40 guilders per last and exchange on London at 12.10
guilders per 2, this price is equal to about £62. 5/
per ton, cost and freight, exclusive of commission.
The April sale averaged 41.64 guilders per picul.
Coal.—A good many cargoes of English are offering affoat, and the demand has subsided. We
note the sale of about 100 toons Scotch of poor
quality at 18 guilders per ton to arrive. In Austrailan nothing has been done. Freight.—The
supply of tonnage is much more than sufficient
for present requirements, and from all appearances we judge that rates will be low at the opening of the season. Exchange.—We quote six
months' sight on London 12.07% @ 12.10 guilders
per pound for private paper.

Our English Letter.

Review of the British Iron, Steel, Metal and Hardware Trades.

(From our Regular Correspondent.) LONDON, ENG., July 30, 1878.

THE TRADE OUTLOOK just now is palpably better; indeed it needs no more than an extremely ordinary acquaintance with passing events to know and feel that things all around are more cheerfully disposed than for two years past. We have got the Old Man off our backs, and are once more breathing freely and without dread of the dogs of war. In every direction one hears of more work being in hand, of numerous inquiries, of many orders being placed, and, in a word, of a distinct and considerable revival of business. Lord Beaconsfield's "peace with honor" has had this splendid effect at all events, whatever

as well as from an almost inestimable posi- as worse than ever, while others speak in tive expenditure, to say nothing of a pro-longed period of suspense and depression. As we are we are content, and are gradu-ally beginning to awaken to a sort of new commercial life—a vitality which has lain dormant for several years past, ever since, in fact, the end of the ballconing period of 1873. At home,

SWEET, SWEET HOME.

that is to say in the country (by which term I mean our agricultural districts), there is a truly wondrous spirit of contentment. The farmers actually express feelings of satisfaction, which I solemnly place on record as being the first and only occarious production. sion on which I have ever known anything of the sort to pacify the bucolic mind. I have been into various parts of the country have been into various parts of the country lately, and can bear personal testimony as to the excellence of the crops. The wheat—much of it already cut and garnered in the Southwest and Midlands—is long in the straw and stout in the ear; oats are prolific; barley is good in yield even if starved in the straw on the clay lands by the spring rains; beans look vary healthy; protectes rains; beans look very healthy; potatoes are "unco guid" so far; turnips and mangold wurzels are bright, strong and free mangold wurzels are bright, strong and free from fly—in short, the farming interests are stolidly satisfied. This state of things is doing great good to the home hardware traders, and their increased custom naturally operates in the direction of stimulating trade in the leading manufacturing centers. A good harvest is now, as it was in much more primitive times, typical of, and a diret incentive to, activity of trade, and is, therefore, a cause for much thankfulness. Throughout Great Britain and Irelandstocks had fallen very low, the rural ironmongers in stolerate whose whose whose induced by the lower prices which have resulted from very severe "shading." For most hardwares the Colonial demand is well supplemented by that from the West Indies and the Continent. had fallen very low, the rural ironmongers and dealers having exercised great caution in order to avoid carrying heavy lots of goods; hence it follows that to replenish their shelves will of itself be a task which ought to furnish no slight manufacturing

THE IMPLEMENT MANUFACTURERS and exporters here (and in Great Britain generally) are deeply disgusted by the trials near Paris last week. I think I told you in a former letter that at Bristol during the "Royal" show week they held several meetings and virtually decided not to compete in the moving classes. The trials of sheef the mowing classes. The trials of sheaf binders came off, however, last week near Mormant (Seine-et-Loire), and, according to Mormant (Seine-et-Loire), and, according to the Ironmonger, the result was that the first prize fell to McCormick & Co., the second to D. M. Osborne & Co., and the third to Walter A. Wood, all American firms. Next week the sheaf binders entered at the Royal show will be tried near Bristol in a much more scientific and thorough manner, so that we shall see whether the decision of the French judges will be upheld. The trials of plows will take place in France on July 29.

THE DECLINING BRITISH EXPORTS have recently been seriously discussed by the have recently been seriously discussed by the Sheffield Chamber of Commerce, which, "after a long and spirited discussion," has resolved that the appointment of a royal commission or a select committee to inquire into the subject is desirable. This somewhat notable resolution was carried by a large majority on the motion of Mr. Frederick Britain, whose statistical researches entitle his commons to high respect. title his opinions to high respect.

MR. MARK FIRTH,

the well-known senior partner of Thomas Firth & Sons, steel manufacturers, &c., of Sheffield, thinks trade is reviving. At all events, Sir Edward Watkin, in speaking at Manchester the other day, said that Mr. Firth, "who watched the progress of trade at Sheffield with great care and judgment, believed there was a sort of little glimmer

ship.
Writing from Glasgow on July 26, James
Watson & Co. said: "We have had a firm
market during the past week, prices ranging between 49/10½ and 50/4, cash, closing this afternoon with buyers 50/1, sellers 50/2, cash. Shipments last week were 8104 tons, against 7950 tons in the corresponding week of 1877. We quote:

											0.		1	NO 3.
G. M. B., at	Glasgow								0		49	/6		48/9
Gartsherrie	44										57	/3		53/
Coltness,	44													54/6
Summerlee,														50/6
Langloan,														51 6
Carnbroe,	6.6			0 1	1 0 1						50	0		49/3
Calder, at P	ort Dune	das				0	0 0	. 0	۰		50	/3		49/
Glengarnoci	z, at Ard	ros	88	u							55	/6		50/9
Eghnton,	44						0 1				50	/6		49 6
Dalmellingt	on, "					0	0 4		٠		50	10		49/6
Shotts, at L	eith								0		58	/		33/
Kinneil, at 1	Bo'ness						9 1		0	2.0		0		51/
The quo	tations	of	3	d	es	81	rs		V	V	m	. C	olvi	a &

Co. and of John E. Swan & Bros. (Limited) are similar to the foregoing. The foreign shipments from the Clyde ports included two locomotive boilers (worth £1600) for the Mauritius, £7671 worth of castings for Rio de Janeiro, £2456 worth of machinery (including £300 worth for New Zealand), and sewing machines valued at £1250 for Rouen France.

THE FAILURES

of the first half of the present year numbered 7516, of which total there were only two electro-platers. In the other retail trades interesting to the readers of *The Iron Age* the figures were: Blacksmiths, 45; builders, architects, &c., 367; carriage builders, ers, architects, &c., 367; carriage builders, 33: ironmongers, japanners and tinmen, 104; oilmen, 17; plumbers, painters and gasfitters, 162; and wheelwrights, 39. In the wholesale trades, Birmingham and the Midland iron districts contributed 96; Newcastle and the North, 87; Bristol, Cardiff, Swansea, &c., 42; Yorkshire, 190; Manchester, 59; and London, 299. There were 152 stoppages in the six months in the ranks of the "engineers, founders, iron, metal and merchants."

very encouraging tones. I happen to know, from my own especial sources of information, that, as a whole, there is a better influx of orders than for a long time past. The cast-steel houses are doing a heavier turnover of castings and rolled steel on home as well as on foreign account, and arms of as well as on foreign account, and some of them are appreciably extending their sales to Eastern Europe, Africa, India and certain of our colonies. All kinds of rolled Besse-mer sells well, whether as wire, rods, bars, rounds or sheets, and for rails there are sevrounds or sneets, and for rails there are several specifications out, in addition to those recently placed. The price is low, it is true, about £5. 10/6 being the "winning" figures. In steel for the cutting and bearing parts of machinery and implements there is a brisk business, and certain implements are moving off well. One Sheffield house last week booked an order for chaff cutters of such size that the deliveries will run over three years. In cutlery, files and edge tools there is a fair turnover, particularly on home and Continental commissions. Most of the electro-platers are fairly busy.

STAFFORDSHIRE AND BIRMINGHAM

have manifested little change since I last wrote, particularly in respect of iron. Producers, however, show more firmness, and their belief in a brighter future is demonwell supplemented by that from the West Indies and the Continent.

SOUTH WALES AND MONMOUTHSHIRE

remain quiet in most respects. At Rhymney steel rail plant equal to a weekly production of about 1000 tons is nearly completed. The total foreign clearances from the ports of the two districts last week reached 5314 tons. Of this aggregate 700 tons of rails went to Russia (Cronstadt); 650 tons rails to Gothenburg from Rhymney; 530 tons to Rio de Janeiro from Page & Co's; 714 tons of bars to Galatz from Llynvi; 130 tons bars to Galatz from Dowlais; 90 tons of pig to Ferrol from Burnyeat, Brown & Co., and 1150 boxes of tin plates for Galatz from Messrs. J. Bovey & Co.. There were imported during the week 5921 tons of iron ore and 576 tons of pig iron. The tin-plate trade is quiet, with no improvement in prices. It is stated that American machinery is about to be introduced into the trade to persede certain handwork.

THE METAL MARKETS

have been steady, with very little animation as a whole. The Ironmonger reports for the week: "Copper remains stationary. At the last Swansea ticketing about 2000 tons of ore sold at an average of 9/8¼ " unit for 7½ % produce. Good ordinary brands Chilibbars are, according to last quotations, at £62. Io/; Wallaroo is quoted at £73. Io/; Burra at £71; English tough, £67. Io/@ £69; best selected, £69 @ £70; strong sheet, £73; Australian unchanged. The has remained inactive, but with a steady market at £61. Io/@ £61. I5/ for Straits, £61. Io/ for Australian and £65 for English ingots. The Flates, although experiencing no material change, bear evidence of participating in the gradual revival of trade. Lead is quiet. English, £16. I5/ @ £17. 2/6, and is quiet. English, £16. 15/@£17. 2/6, and Spanish, £16. 12/6@£16. 15/. At Messrs. W. T. Sargent & Sons' fortnightly sale on Thursday 110 tons were sold at £20. 15/.
Spelter has experienced no change, the prices being £18. 2/6 @ £18. 5/. Quicksilver remains at £7, and Antimony at £49 @ £49.

believed there was a sort of little glimmer of light upon the horizon, and that we were about to have again a better state of trade."

SCOTCH PIG IRON

has been rather firmer, warrants being now 50/3 @ 50/2. In Connal's stores there are 183,902 tons, as compared with 148,488 same date last year, an increase for the week of 1400 tons. This, of course, is exclusive of the heavy stocks in makers' yards. There are 96 Scotch furnaces in blast, each capable of producing 184 tons weekly. In the Forth or Clyde ballast pig is 42/ per ton alongside ship.

Writing from Glasgow on July 26, James

Writing from Glasgow on July 26, James

I take the following from Messrs. Sanders Brothers monthly iron and metal circular, dated London, July 23:

COPPER. Our present quotations are : £. s. d.

 Cores and regulus, per unit.
 0 12 0 0 0 12 6

 Chili bars, per ton.
 6 10 0 6 5 10 0 6 5 10 0

 English tough, per ton.
 68 0 0 0 0 0 0 0

 Selected, per ton.
 70 0 0 0 0 0 0 0

 manufactured, per ton.
 74 0 0 0 0 0 0 0

 Compared with same date 1877: ton. 80 0 0 Month ended June 30.

Month ended June 30.
1877. 1878.
Cwt. 29,774 16,576 Six months ended June 30 | 1876 | 1877 | 1878 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 | 1879 |

The copper market last month was good to its close, a fair business being done for consumption, and a moderate speculative inquiry induced the pretty general belief that we were about to see a steady, though perhaps slow, rise in values. With the com-mencement of the present month, however, bringing with it, as is usual, a stagnant fort-night for stock taking, repairs of machinery, &c., prices drooped and the amount of busi-ness done so far this month has been unprecedentedly small. This affects deliveries from considerable revival of business. Lord Beaconsfield's "peace with honor" has had this splendid effect at all events, whatever his somewhat splenetic political opponents may say of him and of his party. Peace has been preserved, the struggle between Russia and Turkey localized, and by judiciously expending six, or even ten, millions of money at a suitable juncture, England has been preserved from all the horrors of war,

port, and manufactured has been almost as bad, the demand for India being nil. for had, the demand for India being nil, for Bussia very light, and for other export or home requirements very small indeed. dearth of orders should, however, soon shadvantageously by increased business. sale of Wallaroo copper referred to in our of which vary widely according to specificals tissue took place as advised on the 18th tion. For the R. G. Allaway, &c., grade of ult., and the following were the average charcoal tin makers ask 18/6, 1/3 x, 18/1 prices paid, viz.: Wallaroo cakes, £73. 2/7 ingots, £73. 17/; Burra cakes, £70. 11/

Iron, £5 for heavy sections, compared with £5. 5/ same date last year. Steel, £6, compared with £6. 15/ same date last

Exp'ts to United States..tons. 749 other countries 33,908 56,345 44,859 Six months ended June 30 1876. 1877. 1878 Exp'ts to United States. . tons.

159,047 193,438 202,6 Iron rails are dull, in slow demand and little inquired for. Steel Rails quiet but steady in price, most makers expressing the opinion that we would probably not now see any further fall for the present, though few profess yet to see any indications of improve-

SPIEGELEISEN.

£5 \$\text{P} ton for 20 \% English and foreign, with dull demand and a tendency to lower rates. FERROMANGANESE

1877. 1878. 31 ... 2,951 2,281 Exports to United States..tons 255 other countries 2,808

Six months ended June 30.

8ix months ended June 30.

1876, 1877, 1878,

1870, 1877, 1878,

1970, 1877, 1878,

1970, 197 REGULUS OF ANTIMONY

£49, as compared with same date last year £43. Inquiry is very light, and the amount of business done very small, but nominal price is pretty firmly maintained, makers asserting that they cannot go on any longer

TIN. English L. & F. Ingots.. per ton 65
Bars in Barrels. 66
Refined 67
Straits 67 Exports to United States...ewts. 1,354 4,229 441 other countries '6,354 8,850 9,668 Six months ended June 30, 1876. 1877. 1878.

Exports to United States...cwts. 6,114 18,073 4,824 other countries "48,175 43,502 55,544 The imports of tin into England have been Month ended June 30, 1878, 17,271 cwts. six months ended June 30, 1878, 179,239 cwts.

The tin market has not evinced any note-corthy feature during the month, business worthy feature during the month, having been on a limited scale, and fluctuaposition of the article, as will be seen from the figures given below, is not at all satisfactory. Deliveries for the month were small, being no more than 850 tons against 1100 tons in the previous month, while the arrivals of Australian alone have excee 1000 tons. There appears to be great lack of confidence on the part of speculators, and altogether the outlook is far from encouraging, as with a depressed trade in tin plates, and the prospect of continued heavy arrivals from Australia, figures are not likely to get better, and even if prices do not go lower, there is very little chance we think of any permanent improvement being at all probaquiet demand without change in price. The following statement shows the present position of Tin:

Foreign Tin in London Banca and Billiton in Holland	June 1, 1878. Tons. 9,815 3,179	July 1, 1878. Tons. 9,470 2,749	July 1. 1877. Tons. 8,955
Stocks		12,219	11,339
Trading Co. unsold Foreign Tin afloat for Europe	375	6x3 4,410	828 4,657
Total		17,242	16,824

£19. 10/ @ 19. 15/ rather firmer market with more business do-

TIN PLATES. I C. Coke, ordinary brands... 14, I. C. Coke, best brands.... 16, I. C. Charcoal, ordinary br'ds. 18, I. C. Charcoal, best brands... 19,

Exports to United States for month ended June 30, 1878, 10,723 tons; exports to other countries, 4286 tons. Exports to United States for six months ended June 30, 1878 52,715 tons; exports to other countries, 23,609 tons. The breakdown of negotiations for a reduction in the make of tin plates, to which we referred in our last, was followed by a relapse in the market, from which there appears to be at present no prospect of recovery. The orders that were booked when a slight stimulus was given to the trade by these negotiations being set on foot, kept makers occupied several weeks, resisted as long as possible any re duction in prices, but their having ultimately to give way was inevitable, as buyers simply held off the market until they were forced to seek orders again. The demand for plates even at existing low rates is very far from good, either from the States or from the Continent, and all orders of any importance that come into the market are keenly com-peted for, showing unmistakably how bare makers are getting of work. At several works there is a talk of clearing off stock and closing altogether if the market does not improve, as makers assert that they cannot sell at ruling prices without heavy loss, a state of things that must of necessity ar or later have an end. Had the pro posed curtailment of production been carried

actual figures being, June 1, 46,438 into effect and rigidly adhered to by all concerned, a more healthy footing might have been practically adead letter; no demand for home or export, and manufactured has been almost as the demand for Indie heins will for long the latter of the best and manufactured has been almost as the demand for Indie heins will for Indie hei permanent change for the better being possible. It is not easy to give very close quo This tations, as each transaction practically show made the basis of special neg The ticularly as regards charcoal otiation, par-1/2 x, but with an order in hand we should expect to be able to shade these figures. Coke tin of the oil grade are obtainable readily at 14/0, and a few brands are offered

INDUSTRIAL ITEMS.

VERMONT.

The Saranac Horse Nail Works at Ver gennes, are to remove in October to Plattsburg, N. Y., where a large share of the company's stock is held, and their buildings probably be occupied by J. D. Kings I's new horse-nail company. Recently patented machines for the manufacture of these nails are now being constructed.

MASSACHUSETTS.

E. Perkins & Son have just added an 8-horse-power engine to the machinery of their shoe factory in Taunton.

The nail factories of Tremont and Ware-

ham, while not working quite full time yet, are reported to be satisfying their owners. The Chapman Valve Company, at Indian Orchard. Springfield, have received another

unchanged in price, with slow demand, but mo disposition to reduce limits.

LEAD. Our present quotations are: same date, 1877. & 8. d.

LEAD. Springheid, nave received another order from Switzerland for valves.

Compared with quotations are: same date, 1877. haven Iron Works, including land and buildings, patterns, tools and materials, is to be sold at auction at Fairhaven next Saturday.

The Fall River Spool and Bobbin Company have voted to increase their capits stock \$20,0000, payable one-half September I and the balance in six and nine months. The company organized recently under the

laws of the State.

The John Russell Company, of Turners Falls, have elected the following officers: Directors, Charles A. Stevens of Ware (president), Thomas Talbot of Billerica, A. Cook, Josiah Gates and Jacob Rogers of Lowell, H. M. Whitney of Lawrence, Charles T. Crocker of Fitchburg, Edwin Bulkley of New York and B. N. Farren of Montague; treasurer, R. N. Oakman, jr.; assistant-treasurer, E. P. Hitchcock; clerk,

Frederick Clapp.
At the annual meeting of the Fall River Iron Works Company the following board was chosen: Clerk and treasurer, Robert C. Brown; directors, Jefferson Borden, John S. Brayton, William B. Durfee, A. B. Durfee, Richard B. Borden. The following com-mittee to act with the above were chosen to

CONNECTICUT.

The Meriden Silver-plate Company have raised their factory one story, thus providing for about 50 more hands.

The Victor Sewing Machine Company of

Middletown are having to work over hours. They are now two months behind their

Colt's factory at Hartford is making fine breech-loading, double-barreled shot-guns.
They are handsome, without useless ornamentation, and made for use and the best execution. The intention is to produce these guns at \$50 each, though the price has not yet been definitely fixed upon.

NEW YORK.

B. Kreischer & Son, Houston street and East River, are introducing a novelty in hot-air furnaces for warming buildings, known as the Crary Clay Heater, in which all the radiating surfaces are unburned or partially burned clay. The heater is constructed of fire-clay pipes, with square flanges at top and bottom, which, when placed close together with fire-cement, leave enough space for the fire to circulate freely around them. The flanges form the top and bottom of the combustion chamber, bottom of hot-air chamber, and top of cold-air chamber. The fire-box is covered with half round pipes, all joints being filled with fire-clay, which also covers the bottom of the fire-chamber. A jacket wall is placed around these pipes to confine the fire to the combustion chamber, onfine the fire to the combustion nace is much purer, freer from deleterious elements and less dry than that obtained from new furnaces. The United States Rolling Stock Co. have

just declared the usual semi-annual dividend of 8/ per share (2 per cent. in gold), payable of \$5,000,000.

new factory will be in operation in Buffalo within a week or two, for the manufacture of a patent steel wire barbed fence. A large number of orders are already

and.—Exchange.
The Continental Ironworks at Greenpoint have been running night and day for fortnight past.
The Mohawk Manufacturing Company's

pistol works, Mohawk, are again running An ancient piece of Spanish armor metal, 12 feet long, weighing 2,492 pounds, and which was cast in 1634, was received from New York, Saturday, by Meneeley & Co. Troy, who will have the rare relic converted

PENNSYLVANIA.

The coke ovens of Lake & Co., at Scottdale, will be operated this week by a new company from Uniontown.

The foundry and machine shop of English. Borgate & Co., Scottdale, were destroyed by fire on Sunday morning about two o'clock. The buildings with their contents were The firm had but recently started in the business.

Company of this place have a contract for day, together with a schedule of liabilities 100 refrigerator cars for the New York and assets. The secured liabilities amount

les in warm weather.
Two of the puddling furnaces in the old mill of the Bethlehem Iron Company started up Tuesday morning of last week. It is excted more will soon be fired up.

Leesport Iron Company has made a sale of 300 tons of iron to the Phoenix Iron Company, of Phœnixville, and 100 tons to the Wheeler & Wilson Sewing Machine Company.

A steam condenser weighing 18,000 pounds vas cast at the Scott Foundry, Reading, last Friday afternoon. Preparations are being made for the construction of another cotton press similar to one that has just been finished and is being shipped. A number of patent band pullers, used in pressing cotton, are also being made at the foundry, and the place presents a busy appearance. Some men work all night in the casting department, while others in the machine shop ork until 11 o'clock at night

Ore has been discovered on the iron ore land of H. and J. Gable, at Boyertown, at a depth from the surface of 180 feet. Sinking of the shaft was commenced last April. ore is of a superior magnetic quality, and the vein is supposed to be 200 feet thick.

The Johnstown Tribune says: To give an idea of the immense pulling capacity of the Modoc Engines, which are now coming into reneral use on the Middle and Eastern Divisions of the Pennsylvania Railroad, it may be stated that two of them started from the yard in Harrisburg Tuesday morning, having each eighty cars in tow—being the largest and heaviest trains that were ever started from the city. These cars were hauled as far as Columbia, and then divided up into trains of forty cars each, in which shap they were taken to Philadelphia. It is be lieved that a Modoc can haul one hundred ears on a level track, or even where the grade is not very difficult to overcome Lewis Koch has withdrawn from the part

nership heretofore existing between him self, Jacques V. Craig and Jacob Snell doing business under the name of "Keystone Iron Works." Messrs. Craig & Snel have taken into partnership Mr. John H. Craig, of Reading, son of the senior member of the firm, and the business will be here after conducted by the said partners under the old name of "Keystone Iron Works." The establishment located at Reading has en in constant operation for some time.
We take the following from the Sharo

Herald of the 9th inst .: In Sharon, for the week ending Aug. 3, at the Westerman Iron Works, puddle mills went on double turn on Tuesday morning; guide mill double; hoop mill double until Thursday night, remaining two days single turn : nail plate mill went Richard B. Borden. The following committee to act with the above were chosen to consider the division of a portion of the properties of the company and the forming of other and separate corporations: T. J. Borden, A. S. Covel, George B. Durfee, R. C. Borden, A. S. Covel, George B. Durfee, R. C. Borden, A. S. Covel, George B. Durfee, R. C. Borden, A. S. Covel, George B. Durfee, R. C. Borden, A. S. Covel, George B. Durfee, R. C. Borden, A. S. Covel, George B. Durfee, R. C. Borden, G. B. Durfee, R. C. Borden, T. Borden, G. B. Durfee, A. B. Durfe nace doing well. The iron works in this place have run more steadily since the panic

than any others in the State.

At the Kimberly Mill, puddle, guide and old hoop mill (with bar mill from Thursday) double turn; nail plate mill and nail factor; on. Messrs, Kimberly, Carnes & Co., Sharon

are furnishing a car load of hoop iron a day to the Standard Oil Company. The final meeting of the creditors of this firm and the firms in which the company is interested was held at New Castle, on Wednesday of last week. The meeting was large and har-monious throughout, and the result was the acceptance by the creditors of the composi-tion upon the basis proposed at former meetings.

The largest amount of nails ever cut in one day's work in E. & G. Brooke's factory, at Birdsboro', was cut last Thursday, when 1000 kegs of 100 pounds each were cut. Thi is an unusually large day's work, the daily average being about 800 kegs.

Both Mills of the Allentown Rolling Mill

Co. have shut down for want of orders The suspension throws 500 men out of em ployment.

The stove foundry of Orr, Painter & Co., at Reading, started up again on Monday, the 5th inst., often being idle for a month. The patent furnace of J. Carr Bennett, by which he proposes to make steel from the raw ore, has been put in blast at Brady's

The Mansfield lamp-chimney house, which shut down the latter part of June for re-pairs, will start up shortly with a full force Fifty-three tons of iron were produced at the blast furnace of the Warwick Iron

Company, at Pottstown, on Sunday, the PITTSBURGH AND VICINITY.

Hussey, Howe & Co., steel manufacturers, Pittsburgh, are making extensive altera-tions in buildings and improvements. Their Sheet and Plate Mill has been enlarged by

per share (2 per cent. in gold), payable as a naddition of 20 by 60 feet.

Messrs. McIntosh, Hemphill & Co., machinists, Pittsburgh, are nearly through moving into their new quarters.

The Hinge and Chain Factory at Beaver

Falls are at present building 50 new fur-naces for the manufacture of chain, which will give employment to about 100 more

Last Monday Messrs. Riter & Conley, well-known boiler manufacturers of Pittsburgh, shipped two of their boilers to the oil regions of Russia. The boilers will first go to St. Petersburg, and then be taken over land about 1000 miles before they arrive at their destination. This shipment was the outcome of a visit of some Russian capitaloutcome of a visit of some Russian capitalists some time ago, looking up oil news. When they returned home they sent an order back by telegraph, and Messrs. Riter & Conley responded promptly. They are the first boilers ever shipped from this country. The iron firm of Reese, Graff & Woods, Pittsburgh, the suggestions of the control of the suggestions.

Pittsburgh, the suspension of which took place some weeks ago, has at length been compelled to petition for the adjudication of its affairs in the bankrupt court, all efforts to compromise with the creditors, on the terms suggested, having failed. The peti-The Jackson and Woodin Manufacturing tion was filed in the U.S. Court last Monto \$117,510.17 and the unsecured liabilities amount to about \$550,000. The principal assets amount to about \$553,500, and a list of book accounts which will amount to over

Messrs. Ahlborn, Clark & Co., of Alle gheny, manufacturers of enamel work, have filed a petition in the U. S. Court for the adjudication of themselves in bankruptcy Their liabilities aggregate \$12,000,

about an equal amount of assets.

The Rolling Mill of Lauffman & Co., at Apollo, is running steadily.

The Jacobus & Nimick Mfg. Co. are run-

ning their works to the fullest capacity.

The Pittsburgh Forge and Iron Company,
Allegheney, in the bar mill and guide mill

is on single turn. Lewis, Oliver and Phillips are on in all de

partments full at present. They started the three-high train on the bar mill week before Bailey, Farrell & Co., of Pittsburgh, will nce the manufacture of shot in a few

The new hinge works of the McKinney Manufacturing Co. started up last week.

Messrs. Phillips & Co., window glass manufacturers, of the South Side, have started their furnaces for the fall trade. They have the largest furnace and factory in the State of Pennsylvania, and turn out a

fine quality of glass.

Messrs. Gardner Bros., fire-brick manufacturers, of Pittsburgh, are building three benches of fire retorts each, and two of three retorts each for the Wheeling (W. Va.)

The Ihmsen Glass Company, Limited, whose establishment on the South Side was damaged by fire some three weeks ago, have made required repairs and resumed

The Pittsburgh Encaustic Tile Company, Limited, is supplying tile of all patterns and colors, and of quality equal to the best im ported. These tiles have been fully tested and decided to be equal in all respects to the best foreign article

Mr. A. Gottleib has recently been elected resident of the Keystone Bridge Company of Pittsburgh, in place of J. H. Linville, resigned. Mr. Linville is still identified with the company, remaining in Philadelphia. The management of the company is now concentrated in Pittsburgh.

The Atlas Works, Pittsburgh, received the contract on Wednesday of last week for furnishing a new valve chamber for the Lowry engine at the new water works. The bids were as follows: J. Rees, \$3300, in 40 days' time,; McIntosh, Hemphill & Co., \$2800, eight weeks' time; Robinson, Rhea & Co., \$3290, in 7 weeks' time, and the Atlas Works, \$3470, in thirty-three days' time. The contractors entered into bonds with the city to forfeit \$1000 for each days' delay beyond the specified time. The contract was awarded to the Atlas Works on the ground that they offered to do the work in a shorter time than any of ther competitors.

Messrs. Moorhead & Co., Pittsburgh, are

running full time in all departments of their colling mill.

King, Son & Co.'s glass press house, South Side, will resume operations on August 19. The workmen of Everson, Macrum & Co.'s mill, Pittsburgh, did not accept the proposition made by the firm regarding their pay

and as a consequence the mill is idle.

The helpers at the steel works of Smith,
Sutton & Co., Allegheny City, struck last Monday morning.

WEST VIRGINIA.

Operations will be resumed at the Wheeling Hinge Factory on the 19th inst.

The Camelton Coal Co. are running full time with a full force of men.

The Clifton Coal Co., of Clifton, made an assignment on Saturday of last week to Judge T. A. Plants and C. Schon, of Point Pleasant. Liabilities, \$150,000, of which \$125,000 is secured by mortgage on the real

The National Association of Iron, Steel and Tin Workers was in session last week at Wheeling. Over a hundred delegation. The present from all parts of the Union. The Wheeling. Over a hundred delegates were association organized by electing Walter McCabe, of Pittsburgh, president, and Wm. O'Neill, of Wheeling, secretary. The proeedings of the convention were not made

The Belmont Nail Works Co.'s blast furnace at Wheeling will be idle for the next

OHIO.

The Pomeroy Coal Company, with a capital stock of \$125,000, in shares of \$100 each, by A. L. Horton and others, has filed a certificate of incorporation with the Secretary of State.

The Ohio Glass Works, at Bellaire, will

about the middle of September This firm has done nothing for two years.

The National Glass Works, at Bellaire

is on to its fullest capacity at present mak ing chimneys. The Ironton Register says that there is very strong probability that the Ætna Iron

Works will succeed in making some arrange ment with its creditors. The Hanging Rock Stove Foundry is turn-

ng out 60 stoves per day. The reorganization of the Gaylord Rolling Mill Company, at Portsmouth, brings about several material changes. B. B. Gaylord is president and financial manager; Thos. J. Adams, general superintendent; Geo. B.

Bradley, secretary.
One of the furnaces at Mineral Ridge is eing torn down

Messrs. T. & A. Pickering & Co., hard-ware dealers of Cincinnati, have just re-moved to their new and bandsome five-story building, Nos. 196 and 198 Main street, where they have every facility for packing and shipping goods. Their building was erected with especial design for the hardware business, with elevators and all modern conveniences, and is one of the handson hardware establishments in the city. side the spacious front on Main street, the building l as a wing opening on Fifth street, which adds greatly to their facilities for receiving and shipping goods. The company are laying in a complete stock of goods for this year's sales.

INDIANA The Wayne Agricultural Works, Richmond, report a very good demand for their

The Brass Foundry and Machine Works at Fort Wayne, and J. H. Bass, manufacturer of railroad and general castings, at Chicago, are each constructing large new foundries, mainly for increasing the car-wheel capacity of those establishments.

KENTUCKY.

Cottage Furnace, Estill county, is now in blast, making 5 tons per day.

The property of the Hawland Coal and
Iron Works, Boyd county, is to be sold at

public sale on the 26th. manager of Hunnewell Col. S. Eifort, Furnace, says that up to the 1st of August the furnace had turned out 2677 ½ tons of its well-known (mostly) foundry iron this blast, a daily average of 16 to 17 tons.

TENNESSEE. The Carter County Furnace went into blast again July 6. This furnace blew out June 1, having run twelve months and eight days, and made 1496 tons of good car-wheel iron. It is a cold-blast charcoal stack, and uses limonite ores, some lump and some pine. It is run by water-power, with wooden tubs for blast. It is owned by the Knox-ville Car Wheel Co., A. L. Maxwell, president, and J. A. Qynaife, secretary and trea surer. The whole business has been unusu-ally well managed and is paying a profit They make about 30 car wheels a day. This is the only charcoal furnace running in East Tennessee. Five more cold-blast furnace are out and two hot-blast charcoal. It is doubtful if the latter will ever run again The advantages of this region for the manufacture of cold-blast charcoal iron are very

great, but such furnaces are subject to fail

ure from bad location and bad management.

as well as the coke and coal furnaces.

The Cotton-Seed Oil Industry .-

tleman who recently returned to this city from a three months' tour among the South ern States, including Texas, Louisiana, Ala bama, Arkansas and Tennessee, visiting all the oil mills in that section, says that manufacturers are much cheered by the prospects of a large crop of cotton, and are giving orders for the enlargement of their mills for producing cotton-seed oil. We understand that the Columbia Iron Works of Brooklyn are making a large increase in their work ing force, to fill orders for the Taylor hy-draulic presses, which are required to be in readiness for the forthcoming harvest, about Sept. 1. The molders are already busy pre paring for the requisite new castings. Thes presses have capacity for ten tons of seed gallons of oil, and the cost of each set of presses is \$3400. Some of the largest mills in the country consume 125 tons of seed per The past season having been less day. profitable to manufacturers than usual, a check has been put upon new enterprises manufacturers than usual, a but of late there is more encouragement The hydraulic press has received several important improvements, including appara tus for treating oil meal, which seem to embrace every requirement. Also apparatus for measuring an exact and uniform quantity of meal for each bag to be filled, nsuring cake of uniform size and weight besides promoting cleanliness and prevent-ing waste. As is well known in the trade. the manufacture of cotton-seed oil has here the manufacture of cotton-seed oil has here-tofore been very remunerative, the seed actually yielding a larger profit than the fiber. Where \$50 was expected from cot-ton only \$30 was realized, whereas seed costing \$7 to \$5 per ton yielded 38 gallons of oil, worth from 40 to 50 cents per gallon. Cake, produced at the rate of 750 lbs. per ton of seed, is worth, even at the present very low prices, some \$20 per ton; then there is about 20 lbs. of lint to each ton of seed, worth 6 or 7 cents per pound. The hull supplies fuel for running the mill, and the ashes are valuable as a fertilizer.

Exporting Windmills to New Zealand. -The bark Signal, loading at Pier 12, East River, has among her cargo no less than 50 large windmills, ordered by parties in New Zealand, and chiefly for raising water on stock farms, where the wells are sometimes 200 feet deep. They are also required to supply tanks at the railroad stations, and for various agricultural purposes. The style is known as A. J. Corcoran's patent, the apparatus being so contrived that it adjusts itself to all variations of the wind, either as to direction or force. When used for lifting water, the mill stops when the tank is full and resumes its motion if any of the water is drawn off. Not only are the fans selfadjusting, but they are brought up to receive the force of the wind in proportion to the work to be done. The cost varies from \$00 to \$3000, and the pumping capacity from 6 gallons per minute to 500, according to ele vation. Cuba and South America are both good export markets for this sort of machin-ery, wind-power being in growing favor on the sugar estates of Cuba to pump molasses. and windmills are occasionally used for similar purposes in the sugar warehouses at Havana and Cardenas. English windmills are made after the old Dutch fashion, with broad fans and the general construction is heavy. The use of wind-power for pumping is now quite common in Connecticut. there being a full score of mills attached to rural residences in Stamford alone, and they are seen all over Long Island.

The New York Plow Co., whose buildings were lately destroyed by fire, announce the completion of their new buildings. The main building is 400 feet in length, heated by steam, with steam elevator, gas and wa-It contains an entire outfit of new and improved machinery and tools for iron and wood working. In the rear of this building are large foundries, forge shops, engine building with 200-horse power engine and large storage buildings for finished goods. The basement will be used as polishing room The basement will be used as polishing room for their Adamant plows and is admirably adapted for that purpose. The patterns are kept in a fire-proof place as before.

Mr. William G. Neilson, general manager of the Standard Steel Works, who sailed for Europe on Feb. 7 to supervise the transfer to the Russian government of the forty loco-motives built for it by the Baldwin Locomo-tive Works, arrived home safely on the 4th of August.

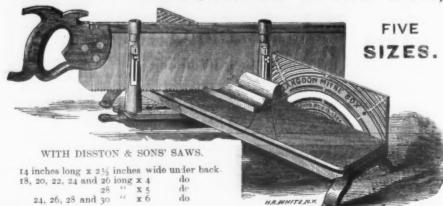
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Sole Owners and Manufacturers of the

LANCDON ADJUSTABLE MITRE BOX,



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Manufacturers of U.S. Standard BOXWOOD and IVORY RULES. Also Exclusive Manufacturers of L. C. STEPHENS' PATENT COMBINATION RULE.

Rules graduated in foreign measure to order.

H. DURRIE & CO., New York Agents, who will supply the trade at factory prices.

EXCELSIOR WRINGERS

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FOR STATIONARY TUBS.

They are made for use on square tubs, such as are principally used in cities, and are the only Wringers especially adapted for that purpose.

Send for an illustrated price list to the manufacturers,

BAILEY WRINGING MACHINE CO.,

No. 99 Chambers Street, New York.

ALSO MANUFACTURERS' AGENTS FOR

Defiance Metallic Planes, Simpson's Adjustable Vises, American Meat Choppers, Silver's Stuffers and Presses, Domestic Ironing Mangles.

SPECIAL QUOTATIONS ON THE ABOVE GOODS FOR EXPORT.

The 1878 Pennsylvania Lawn Mower.

LIGHT DRAFT AND EASILY ADJUSTED.



This machine presents all the advantages of a light and durable LAWN MOWER, and machine in use, and all that is necessary to satisfy our customers of its superiority is to [P. O. Address, Neponset, Mass. place it in competion with any other machine in the town in which they may reside. Every machine warranted to work as

	PRICE LIST.	
Width of Cutter.	Description.	Price.
12 inch.	8 in. driving wheel, wt. 331/2 lbs. Can be used by a lad. each,	\$18.00
84 **	8 in driving wheel, wt. 34 1/4 lbs. Can be used by a lady	20.00
16 ''	8 in. driving wheel, wt. 3634 lbs. One man size	22.00

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LLOYD, SUPPLEE & WALTON, 625 Market St., Philadelphia. HORACE DURRIE & CO., 97 Chambers & 81 Reade Sts., N. Y.

RHODE ISLAND HORSE SHOE CO.,

PERKINS and RHODE ISLAND PATTERNS of

HORSE AND MULE SHOES.

NATIONAL Horse Nail Co.

FINISHED

[BRIGHT OR BLUED]



nails are made of the best brands of NOH -WAY IRON, and are guaranteed to be equal to

NATIONAL HORSE NAIL CO., VERCENNES, VT.

HORACE DURRIE & CO., Agents,

No. 97 Chambers St., New York

PUTNAM'S HOT FORGED & HAMMER POINTED Horse Shoe Nails.



Made from the best of Norway Iron.

The only hot forged machine made Horse Shoe
Nail in the world that is not shedred or cut on the
rount. Warranted never to which or slider in the driving, and to hold the shoe longer than any other Nail. For sale by the hardware and iron trade generally.

PUTNAM NAIL CO.

TACKLE BLOCKS BURR & CO.,

Manufacturers of Waterman and Ru Patent Iron Strapped Blocks. ROPE STRAPPED BLOCKS.



WM. ESTERBROOK,

FIRE SHOVELS, Etc.

311 Cherry St., PHILADELPHIA.

L. COES'

SCREW WRENCHES.

L. COES & CO., Worcester, Mass.



We myite the particular attention of the rade to our New Straight Bar Wrench, widened. full size of the larger part of the so called "reinforced or jog bar." Also our enlarged jaw, made with ribe on the inside, having a full bearing on the front of bar (see sectional view making the jaw fully equal to any strain the bar may be subjected to.

These recent improvements in combination with the nut inside the ferrule firmly screwed up flush, against square, rolld bearings (that cannot be forced out of place by use), verifies our claim that we are manufacturing the

strongest Wrench in the market.

We would also call attention to the fact. that in 1869 we made several important im-provements secured by patents), on the old wrench previously manufactured by L. & A. G. Coes which were at once closely imitated and sold as the Genuine Wiench by certain partics who seem to rely upon our improvemente to keep up their reputation as manufacturers, and although the fact of their imitating our goods may be good evidence that we manufac-ture a superior Wrench, we wish the trade may not be deceived on the question of originality. Trusting the trade will fully appreciate our recent efforts, both in improvements on the Wrench and in the adoption of a Trade Mark, we would cantion them against imitations. None genuine unless stamped!

"L. COES & CO."

Warehouse, 97 Chambers St., & 81 Reade St., N. Y. HORACE DURRIE & CO., Sole Agents.

These Axes made from



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Molding and Pinishing Nails, with or without heads. Brush Makers', Upholsters's, Clear Box, Basket, Chair and Undertakers' Finishing Nails a specialty. Brass and Irou. Bright Iron Bivets. Brass and Iron Escutcheon as, with flat, round and fancy heads, all sizes on hand and to order.

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CHAMPION HOC RINGER RINGS and HOLDER.







BROWN'S HOC AND PIQ RINGER and RINGS. Only single Ringle market that ca

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THE BEST IN THE MARKET.

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EATON, COLE & BURNHAM COMPANY,

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SWEDES IRON, UPHOLSTERERS', GIMP AND CUT TACKS.

Tinned, Leathered and Large Head Iron Carpet Tacks. TRUNK, CLOUT AND FINISHING NAILS, BRADS, PATENT BRADS. &c. Lining, Saddle and Tufting Nails, Coffin Tacks and Tufting Buttons.

COPPER, ZINC, STEEL & SWEDES & COMMON IRON SHOE NAILS. &c. Copper, Iron and Galvanized Boat Nails, Regular or Chisel Pointed.

Brass & Iron Wire Nails, Moulding Nails & Escutcheon Pins, Chair & Cigar Box Nails, 2d & 3d Fine Nails, Roofing Tacks and Nails, &c., &c.

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Lewis' Patent Single Twist Spur Bits,

GERMAN CIMLET BITS, etc.



McNab & Harlin Mfg. Co.,

BRASS COCKS AND VALVES

For STEAM, WATER

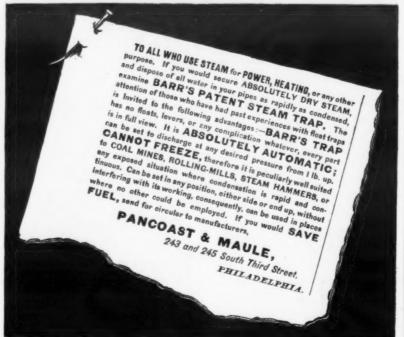
and GAS.

Iron Pipe and Fittings, Plain and Galvanized. PLUMBERS' MATERIALS.

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Automatic Revolving Scraper.



Iron or Steel Bottom. Nothing equal to our Revolving Scraper for removing earth.

Also, Contractors' Plows and a full line of Barrows.

REVOLVING SCRAPER CO. Columbus Ohio.

MANUFACTURIN



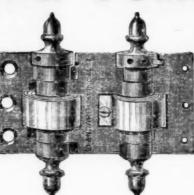
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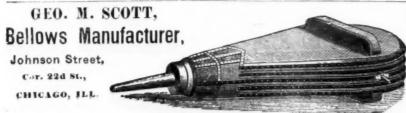
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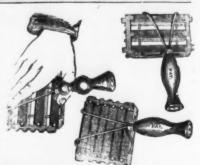
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Metal Dealers and Brokers. Crane U. O., 1c4 John, N. Y. Dickerson, Van Dusen & Co., 22 and 31 Cliff, N. Y. Greeg H. L. & Co., 1c8 Walnut, Philadelphia. 5 Phelps, Dodge & Co., Cliff, bet., John & Pilcon, N. Y. Guine & W. Co. William, N. and Penn, Phila. 5 Sellew R. & Co., St. Louis, Mo. 2 Starr, John Halifax, Nova Scotia. 2 Starr, John Halifax, Nova Scotia.	McGowan John
Purves A. & Son, cor. South and Penn, Phila	Valley Machine
Sellew R. &. Co., St. Louis, Mo	Albany Steam
Metal Elbows. Hogen Elbow Co., Cleveland, O31	Chester Castings
Metallurgiets. Britton J. Blodgett, 330 Walnut, Philadelphia	Rnowles Steam McGowan John Shultz M., Cinc Valley Machine Steam Traps. Albany Steam' Steel Castings Chester Casting Eureka Cast St Flagg Stanley G Fittsburgh Steel Steel Importe
Metals Perforated. Hayes G., 718th ave	Fitsburgh Stee Steel Importe Carr J. & Riley Hobson Franci Moss F. W., &o. Pierson & Co., Van Wart, Son Wolff R. H. & C Steel (Mushet S Randall & Jone Steel Manufac
Metal Roofing. Brass Goods Mfg. Co., 280 Pearl, N. Y	Hobson Franci Moss F. W., 80
Brass Goods Mfg. Co., 28c Pearl, N. Y	Pierson & Co., Van Wart, Son
Chester Mica & Porcelain Co., 87 Liberty, N. Y34 Miners' Candles, Makers of.	Steel (Mushet S
James Boyd's Sons, 10 and 12 Franklin, N. Y40	Steel Manufac Cleveland Roll
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Mineral Wool. Elbers Alexander D., 261/2 Broadway, N. Y38	Rowland Wm.
Models. Burrows Wm., og Fulton, N. Y	Rowland Wm. Sanderson Bro Smith, Sutton Singer, Nimick
Mouse Traps.	i standard Steel
Mouse Traps. 1 42 Dietz R. E., 54 and 56 Fulton, N. Y. 42 Oliver E., 106 and 108 Beekman N. Y. 25 Ripley Mfg. Co., Unionville, Conn. 11	Steel Restorati The Edgar Tho Wardlow S. & C
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Schoenberger & Co., Pittsburgh, Pa	Steel Spiral S Cary & Moen, 2 Chatillon & Sor
Nail Machinery. Coyne & Hatry, Pittsburgh, Pa 4	Chatillon & Sor
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Hartman John, 37% N. Seventh, Philadelphia	Step Ladders. Mason Mfg. Co. Stocks and Di Holroyd & Co., Stone Ironwa Metal Stamping
Nickel Platers' Supplies. Colt A. T., 47 Beekman, N. Y. Condit, Hanson & Van Winkle, Newark, N. J39 Zucker & Levett, 689 and 641 W. 518t, N. Y27	Metal Stamping
Condit, Hanson & Van Winkle, Newark, N. J39 Zucker & Levett, 639 and 641 W. 51st, N. Y27	
Night Latches. Many Francis, 143 Chambers, N. Y	7
Norway Shapes, Rollers of. Rowland Wm. & Harvey, Frankford, Philadelphia. 42	
Note Broker. Gallaudet P. W., 3 and 5 Wall, N. Y	L
Nut Tapping Machines. Howard Iron Works, Buffalo. N. Y	
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Oil Stones. Boyd & Chase, 107th and Harlem River. N. Y	
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Boker Hermann & Co., 101 Duane, N. Y. 11 Presses, Power, Makers of, Hilss & Williams, 167 Flymouth, Brooklyn. 41 Merriman A. H., West Meriden, Conn. 41 The Stiles & Parker Press Co., Middletown, Conn. 41 The Stiles & Parker Press Co., Middletown, Conn. 41 Heaven & Blowers, Makers of,	Fastening.
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Pressure Blowers, Makers of. Keystone Portable Forge Co., Philadelphia40	Rubber
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Rails, Iron or Steel, Makers of. Cambria Iron Co., Johnstown, Pa. Cleveland Rolling Mill Co., Cleveland, Ohio	
Railway, Car and Locomotive Forgings. Wilson, Walker & Co., Pittsburgh, Pa	Purchase Gea
Wilson, Walker & Co., Philaburgh, Pd 4	
Revolving Scrapers.	. (
Revolving Scrapers. Revolving Scraper Co., Columbus, Ohio26	
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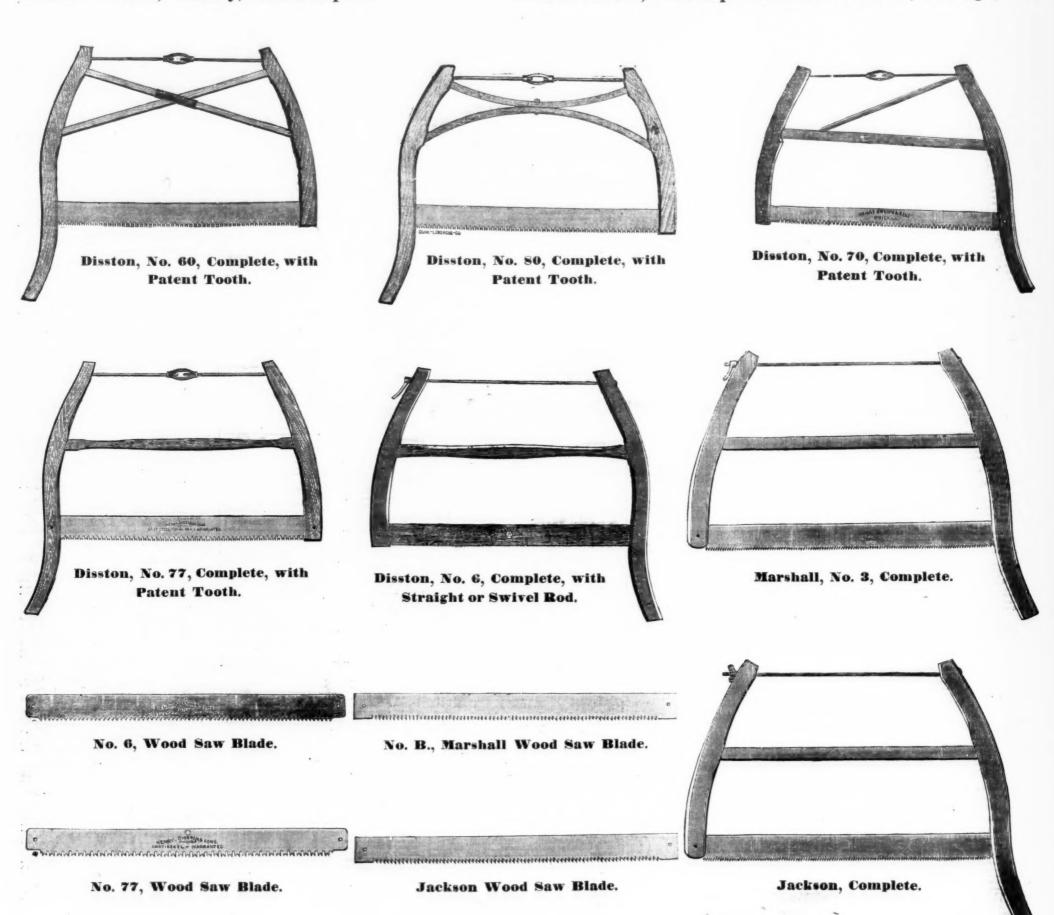
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" N. Y. State	Oflers.— Brass and Olmeted's
Sevindur'sNo. 25 ₹ doz \$6,00, dis 50 Rolled Blind Hinges	Olmsted's. Broughton's Malicable
Rolled Raised dis 70&10 Wrought Strap and 1, list Dec. 20, '77 dis 50&10 Plate Hinges 6 to 10 to 10, 8&6 3 5 5	Prior's Pate Ox Ball Dencils.
"Providence" (over 10 in. 4%C @ B)	Pencils. Faber's Dixon's Le
Heavy Welded Hook \ 8 to 12 in., 11 0 \ 14 in. & up, 9\cdot 2 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Pench P Lightning.
Screw Hook and Eye	Brass Head
Socket	Porcelain H
Planters' dis 35 @ 40 Scovill Pattern dis 25 @ 30 Planters', Handled dis 35	Plaiting Magie Astor Plaiti
Scovill Pattern, Handled	Flanes a
Bird Cage, Sargent's list. dis 60&rc&ro Cotton . dis 50 Cotton (Humason & Beckley Mfg. Co.) dis 50	Planes a First Qualit Second Bailey's Pat Bailey's "V
Belt, (new list) ♥ c	Defiance Ad D. R. Barton Plane Irons
" McGill's, \$3.00 ₹ doz dis 10 " Skinner's, \$6.25 per dos dis 20 Clothes Line, Hart's list	
Hooks. Bird Cage, Sargont's list dis 60&1c&1c Cotton dis 90 Cotton dis 90 Cotton dis 90 Belt, (acw list) V C. dis 90 Skinner's \$0.2 \text{ pri dos.} dis 90	
rainess (Reading list dis 4.81082) Coat and Hat, Hart's list dis 5.85.800 "Sargent's list dis 65.8200 dis 65.8200 dis 65.8200	Pliers Br
" Reading. dis 464500222 " T. & S. Mfg. Co's list dis 22 Tassed (T. & S. Mfg. Co.). dis 40 Weought & Stanles and Books and Stanles dis 25 02 02 00 00	Pliers and Button's Para Hull's Patent Humason & Gas Pliers
Staples, Stanley's list	Eureka Plie Russell's Pa P. S. & W. C
Whiffletree—Patent	P. S. & W. C Plumbs at Disston's Stanley R. &
# Brass	Chapin's Pa
Pridsewater Iron Co. Nos. 5 6 2 8 0 20	Johnson's P Davis' Pater
Pointed and Polished \ 26c 23c 2ic 20c 19c 18c Nos. 5 6 7 8 9 10 Cortiand 29c 26c 24c 23c 22c 21c \ dis 10	Davis' Pater Pocket Leve Post Hol Samson Pos
Globe (New list). \\ \begin{array}{cccccccccccccccccccccccccccccccccccc	Fletcher Por Vaughan's I 6 in. \$23.60
Finished	Potato Pay State "Saratoga"
National. Pointed and Polished, Pat. Fin. 25 23 22 21 200 net Putnam Hammer, P't'd 26 23 21 20 19 18c net	Pruning Disston's Co
Nos.	Pulleys. Judd's Axle Hot House a
Mule Shoes \$ keg 4.625 Perkins' Snow \$ keg 4.125	Jap'd Screw Brass Screw Jap'd Side Clothe
American Ice Chisel.	Clothe Hay Fork So 'A Shade Rock.
White's Sliding Head Picks. Duniap's Ring Picks. Wood Head Picks, Sargent's. doz 200, dis 25 doz 28.8; dis 60&20 Kis 50 Duniap's Ring Picks, Sargent's. doz 28.8; dis 60&20 Stockto	Punches. 3elt or Drive
iron	Spring Leach Bemis Solid, Tinner
Perkins' Snow. # #69 4.134 To AWIs. Chisels. &c. American Ice Chisel # doz \$6.00 dis 45 % National " # doz \$6.25, dis 20 % Novelty Ice Breakers # doz \$6.25, dis 20 % Novelty Ice Breakers # doz \$6.25, dis 20 % White's Stiding Head Picks. # doz \$6.25 dis 20 % Dunlap's Ring Picks. # doz \$1.85, dis 30 % Fron Le Allets Pickin Head # doz 1.85, dis 30 % Le Arcs, Small Cast or Malleable # doz 2.00 net fice Arcs, Small Cast or Malleable # doz 1.25, net Combination Ice Tools # doz \$2.50, dis 30 % To et al. # doz 2.25 net Combination Ice Tools # doz \$2.50, dis 30 % To ettles.	Rail.
K ettles. Brass, 7 to 13 inches inclusive	Barn Door, 3 Rakes, Cast Steel
Knives. Ames' Butcher Knives dis 20 % Shoe dis 15 %	85.00 Malleable
Kulves. dla 20 % Ames' Butcher Kalves dis 15 % Shoe dis 15 % Shoe dis 15 % dis 15 % dis 15 % dis 20 % foran's Shoe and Bread Knives and Straw—' Wadsworth's'' dis 20 % Table and Pocket. See Cutlery	Razor St Genuine Em Badger's Em
Knobs. Sarriage (Jap'd &c. ₹ gross). dis 5c&7c% Base—Common . dis 3c&1c% Plush Tip dis 5c&5c% Elastic End. No. 8	Badger's Em Badger's (not Evans' Imitation En
" Plush Tip. dis 10 % " Elastic End. No. 8 dis 65&5 % Door. Mineral.	Hunt's Chapman Torrey's Saunder's
" Plated Same discounts as Door Locks. " Plor	Rivets. Iron and Tin
Formatture, Plain	Copper Rivet
Ladies. dis 50 % Ladies. dis 55 % Melting—Hart's. dis 55 % 10 % Sarcon's dis 50 % 10 %	Doty's Revol
Adless	Stair
Lanterns. No. c. \$10.00; No. 1, \$11.50; ubular. With Guards, 500 extra.; furricane No. s. 8 dos \$11.50 dis 108105.	Acme (Anti-1
Turricane	Rope. Manila
e Beque	Tar'd
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Orceian Lined. \$ doz \$4.00 ast to \$ uniap's Improved. \$ doz \$4.00 net ammis* Patent. No. 1. \$7.50: No. 2. \$2.00 \$	Rules. Chapin's Stanley
Lines.—Linen Fishdis 25 %	Stanley Standard Stephens' Willis, Thrall Stearn's
Otton Chair. Lake Chair. Nos. 0, 1, 2, 3, \$5.00, \$6.50, \$7.00 \$7.00	Stearn's S ad Irons. From 4 to Self-Heating.
Locks and Latches. abinet—Gaylord dis 25&2 5 Eagle dis 25&2 5	Gleason's Shie Enterprise Pa Mrs. Pott's Pa
" Bridgeport Lock Co dis 25.2 % runk dis 25.5 % angstroth & Crane's List Jan. 1. '72.	Combined Fit Sand Pape Baeder & Ada
Round Key. dis 40&10 % Flat Key. dis 345&10 % arnes & Delta, Flat Key. dis 35 %	64 64 88
ale Lock Co., Flat Key dis 40 % hepardson's, Flat Key dis 35 merican Lock Mfg. Co. dis 3316 %	Sash Cord Common
Many's "Extension Cylinder"	Silver Lake R
orwalk dis 50&10&2 % orwich dis 50&10&2 % usseli & Erwin dis 70&2 %	Steel Ribbon.
Tanford dis to&to&to&to	Sash Lock Clark's, No. 1, Ferguson's Walker's
adlocks—Russell & Erwin Mallory, Wneeler & Co dis 33/6& \$ Wm. Wilcox & Co and 2 \$ for cash	Hammond's V Northup Wind "The Perfect,
ontinental	Sash Weig Sausage S
J. H. McWilliams	Miles. Perry Draw Cut No.
Penn Lock Works	Silver's Saws. Disston's Circ
A allets Hickory and Lignum vive dis 10x10 Ment Cutters. 12 3 4 400 - dis 25 2 4 4 400 - dis 25 2 4 4 400 - dis 25 2 4 4 400 - dis 25 4 400 - dis 25 4 4 4 4 4 4 4 4 4	" Cross
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# doz\$33.00 40.00 51.00—dis 50.82 5 raw CutNos. 5 2 5 8 10 Fach. \$40.00 75.00 80.00 225.00 40.00—dis 20.5	" One- " Buci " Bille
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Meinsses Gates. dis 6214&10 % Genuine dis 6214&10 % dis 6214&10 % dis 6214 % dis 6216 % dis 6	Nos Per doz82
ncoln's Convine	Red. Ponanea
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atts. See Trade Report Nuts and Washers. 20 off list 12 agon Nuts. See Off list	Common Leve Leach's
LIST IN SEC	manumer, Hote

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1 50 5	Oakum. Best.	# B 959	9
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15 % 30 % 40 %	Porcelain Head, T. & S. Mfg. Co. Pluking Frans		
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et	Rollers. Barn Door, Sargent's list Noveity.	dis 708 58 to \$	
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	' Tar'd Rope	# 510 men # 11 13 0	
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× × ×	"Tar'd Rope" Lath Yarn Lath Yarn Hay Rope % inch : "Hay Rope % an	# b 11/40 # b 13 c # b 12 c and larger # b 10/40 34 inch # b 11 c d 5-16 inch # b 11/40	
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A NA BERT E	Tar'd Rope. "Lath Yarn. "Hay Rope. ½ inch "Hay Rope. ½ an Ruites. Box Chapin's. Stanley. Standard. Stephens. Willis. Thrall & Son. Steward's. Ind Irons. From 4 to 10 bs.	W B 114g W B 13 C W B 14 C W B	
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TO THE RESERVE OF THE PERSON O	Gleason's Shield and Toilet. Enterprise Patent Cold Handle. Mrs. Pott's Pat. Cold Handle. "Cro Combined Fluter and Sad Iron. pe Sand Paper. Baseder & Adamson's Flint, oo to 1/6 & Star Star Star Star Star Star Star Star	## dos #17.cc net dis 215	
TO THE RESERVE OF THE PERSON O	Gleason's Shield and Toilet. Enterprise Patent Cold Handle. Mrs. Pott's Pat. Cold Handle. "Cro Combined Fluter and Sad Iron. pe Sand Paper. Baseder & Adamson's Flint, oo to 1/6 & Star Star Star Star Star Star Star Star	## dos #17.cc net dis 215	
THE REPORT OF THE PERSON AND THE PER	Gleason's Shield and Toilet. Enterprise Patent Cold Handle. Mrs. Pott's Pat. Cold Handle. Mrs. Pott's Pat. Cold Handle. Wrs. Pott's Pat. Cold Handle. "Croombined Fluter and Sad Iron. po Sand Paper. Baeder & Adamson's Flint, oo to 1/8 "Assorted "Star" "Patent is as B. & A. "Star" "Breent Patent "Star" "Drab Cotton. "Breent Patent "Star "Drab Cotton. "Steel Ribbon. "Insh 1-cels. Clark's, No. 1, \$10.00; No. 2, \$5.00 pe Ferruson's. "Nor. Replaced "Nor. Plain Jap'd. "Steel Ribbon. "Insh 1-cels. Clark's, No. 1, \$10.00; No. 2, \$5.00 pe Ferruson's. "Por Knob Jap'd. "Nor. Plain Jap'd. "Steel Ribbon. "Star Panel, No. 1, \$10.00; No. 1,	## GOS \$17,00 net	
THE REPORT OF THE PERSON AND THE PER	Gleason's Shield and Toilet. Enterprise Patent Cold Handle. Mrs. Pott's Pat. Cold Handle. Mrs. Pott's Pat. Cold Handle. Wrs. Pott's Pat. Cold Handle. "Croombined Fluter and Sad Iron. po Sand Paper. Baeder & Adamson's Flint, oo to 1/8 "Assorted "Star" "Patent is as B. & A. "Star" "Breent Patent "Star" "Drab Cotton. "Breent Patent "Star "Drab Cotton. "Steel Ribbon. "Insh 1-cels. Clark's, No. 1, \$10.00; No. 2, \$5.00 pe Ferruson's. "Nor. Replaced "Nor. Plain Jap'd. "Steel Ribbon. "Insh 1-cels. Clark's, No. 1, \$10.00; No. 2, \$5.00 pe Ferruson's. "Por Knob Jap'd. "Nor. Plain Jap'd. "Steel Ribbon. "Star Panel, No. 1, \$10.00; No. 1,	## GOS \$17,00 net	
THE REPORT OF THE PERSON AND THE PER	Gleason's Shield and Toilet. Enterprise Patent Cold Handle. Mrs. Pott's Pat. Cold Handle. "Cro Combined Fluter and Sad Iron. pe Sand Paper. Baseder & Adamson's Flint, oo to 1/6 & Star Star Star Star Star Star Star Star	## GOS \$17,00 net	

August 15, 1878.	
Bemis & Call Co.'s Spring Hammer, New Pat. Lover dis 206205	Washer Cutters # dos \$12.00 dis 10 %
dis 20&10 5 Alken's Genuine. \$13.00, dis 40&10 \$ " Imitation. \$7.00, dis 40 \$ Hart's Patent Lever	Washer Cutters. # doz \$12.00 dis 10 5
Scales. Hatch, Counter	Washers.—See Nuts and Washers. Weather Strips. Protective Ventilator Co. sdia 25 \$
Tea.	Wire. Brass and Copper List of July 1, 1878 dis 10 %
Pairbanks' dis 20%5 % Howe's dis 20%5 % the state of the	Nos. 19 @ 20, dis 57% @ 57% % Nos. 27 @ 40, dis 52% @ 55% Nos. 27 @ 40, dis 52% @ 65% Nos. 27% No
" Eureka dis 20 % Universal Family dis 25 % Payorite Family dis 25 %	Galvanized, Nos. o to 6
Scales	Well Wheels Revised list. dis Cokto 5 Wire.
Serapers. P doz \$5.00, dia 10 5	Grape, Nos. 10 to 14
Foot. dis to \$10 % in \$10 % in \$20 % in	No. 12
Screw Drivers. Hart, Bliven & Mead, new list	Stubs Steel Wire
Disston's Patent Excelsior. dis 65 %	Stael Music Wire, Nos. 12 to 27. # 5 \$1.00. not Judd's Picture Wire
Stanley Rule & Level Cos., Black Handlesdis 35&10 5 Varnished H'ledis 45&10 5 Sarront & Co.'s	Wrenches. American Adjustable
Screws	Collins & Co. S. dis 45 Coes' Genuine dis 500 to 50
Round Head Iron	" (Malicable)
Japanned, list of Plain Screws. dis 45 % Lag or Common Coach	Taft's Pattern dis 75&10 % Davis' Patent Duplex new list, dis 25 % Remis & Call's Parent Combination dis 25 %
Bed	" Merrick's Pattern dis 25&256200 % " Briggs' Pattern dis 25&10 %
Bench, Iron. dis 5c&10 % dos 83.co, net	Aiken Pocket (Bright)
Band dis 25k 5 Hand Rail, Sargent's dis 60&10 5	11 No. 2 63.00
Jack Bell Bottom dls 20 % Jack (Wilson's). dls 30 %	1 No. 2½ 05.00 1 No. 2½ 05.00 1 No. 3 06.00
Shears and Scissors. Cast Steel	Novelty, No. 10, with Cog Wheels 60,00
" Iron, 'American". dis 45 % Seymour's Straight Trimmers dis 65 % " Scissors dis 65 % dis 65 %	No. E, for Set Tubs 66.00 Keystone No. 1, Wood Frame, no Gear. 54.00
Shears and Scissors. Cast Steel. American dis 4,85,8 " fron," dis 4,85,8 Seymour's Straight Trimmers dis 4,85,8 Pruning Frankers dis 5,8 Frank	No. 10, Wood Common Gear. 50,000 Peerless, No. 2 53,000 G3,00
Heinisch Trimmers and Scissorsdis 60 % "R. H. S. " dis 61 % Sheen Shears	Judd's Picture Wire. Gis Sok20 5
Bail's Pat. Solid Steel Bent gold, net	Stamped Tinware. Common Stamped Ware, L. & G. List, April, 1878, dls 50810 5 Stamped Deep and Retinned Ware, L. & G. List, April, 1878 dis 50810 5
Sheaves. M. W. & Co., list	April, 1878
Sheayes	METALS.
"Moore's Anti-Friction dis 50 22 3 "Moore's Anti-Friction dis 50 22 3 Etiding Shutter, R. & E. list dis 50 22 3	1RONDury: Bars, I to 134c. * h; Sheet, Band
Moore's Anti-Friction dis 45 % Philadelphis, Hanging dis 40%, & 2 %	IRON.—DUTY: Bars, I to 1½c. F m; Sheet, Band Hoop and Scroll, 1½ to 1½c. F m; provided, that none of the above Iron shall pay a less rate of duty than 35 per cent. Pig. \$7 F ton: Polished Sheet, 3c. F m; Wrought Scrap, 88 F ton: Cast Scrap, \$6 per ton. Railroad 70c. F ton Ms. Boller and Plate, 1½c. F m.
Shovels and Spades. Ames. dis 50% 5 "not stamped "Ames" dis 32% 5 Rowland's. dis 60% 5 Rimball Shovel Co. dis 20% 5 Rimball Shovel Co. dis 20% 5 Riddleboro' Shovel Co. dis 30 5 Remington's (Lowman's Fatent). dis 30 5 Remington's (Lowman's Fatent). dis 30 5 Rowland & Co., Anchor Brand dis 50% 5 Oxford Patent dis 60% 5 Shovels and Tengs. dis 26% 5	Railroad 70c. \$\psi\$ 100 \$\text{Bs.}\$ Boller and Flate, 1\(\frac{1}{2}\text{c.}\pi\) \$\text{b.}\$ Pig Iron—AMERICAN. Foundry No. 1
Rowland's	Railroad 70c. % 100 % Boller and Plate, 15c. % % % % Pig I ron — AMERICAN .
Middleboro' Shovel Co. dis 30 F Remington's (Lowman's Patent). dis 30 F Dunning's Shovels and Scoops. dis 3087% 5	Glengarnock # ton 23.75 Eglinton # ton 22.75 Coltness # ton 24.75
B. Rowland & Co., Anchor Brand. dis 50 % Oxford Patent. dis 40 % 5 % Oxford Patent. dis 40 % 5 %	Rails. P ton \$32.00 @ 36.00
Oxford Patent Glis 40% 5	Old Ralis. Pton 1700 6 15.00 Scrap. Wrought Scrap, from yard. Pton, nem. 21.00 22.00 Bar Iron, from Store.
Square Frames, Round Cornered, by casedis 70 \$	Common Iron:
Spoke Shaves. Defiance Metallic	% to 2 in. round and square
1001 018 40% 5 % Wood 018 30 % Bailey's dis 25&10 ≸	Refined Iron: \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Less than a case dis 55% to 5 Spoike Shaves. Defiance Metallic new list, dis 22% to 3 Iron dis 40% 5 Wood dis 30% Bailey's dis 32% 5 Spoke Trimmers if dor \$10.00, dis 40 \$ Steam's if dor \$10.00, dis 40 \$ Ives' No. 1, \$1500; No. 2, \$12.00 if dog. dis 40% for 5 Douglass' if dor \$9.00, dis 20% to 5 Spoops.	Bands—1 to 6x3-16 to No. 12. P B 2.40 Swedish Iron:
Douglass'	Sheet Iron. Common R. G. American. American.
Basting	1 to 0 im. x)a and 5 to
L Boardman's Sons, A: dis 40&5\$5\$ Rogers & Bro., A I. dis 40&5 \$ cash Reed & Barton, dis 40&5 \$ cash	27
Rogers Cutlery Co	" 21 to 24, " 東 b 7 % c; " 東 b 6 c c s to 24, " 東 b 7 % c; " 東 b 6 % c w b 7 % c; " 東 b 7 c c c w b 7 c c c c w b 7 c c c c c c c c c c c c c c c c c c
German Silver (Hall & Elton). dis 30\$5 \$ German Silver (L. Boardman's Sons). dis 30\$5 \$ Diamond Steel (L. Boardman's Sons). dis 30\$5 \$	25
Tin (P. S. & W.), Teas. \$1.50 % gross, net " " Tables. \$2.50 % gross, net Tin Cowles Hdw Co.). dis 10 %	COPPER.—DUTY: Pig, Bar and Ingot, 5c; Old Copper, 4c \$\pi\$ manufactured (including all articles of
Stocke and Dies. dis care !	which Copper is a component of chief value), 45 % ad valorem. American Ingot
Signe. Stone. P 5 6c Ax Stone P 5 8c dis 30210 \$ Sand Stone. P 5 8c dis 30210 \$ Sand Stone. Some P 5 8c dis 30210 \$ Sand Stone. Some P 5 8c dis 30210 \$ Sand Stone. Some P 5 8c dis 30210 \$ Sand Stone. Some P 5 8c dis 30210 \$ Washita Stone Some No. 1 P 5 206 Arkanaas Stone. No. 1 P 5 206 Arkanaas Stone. No. 1 P 5 206 Turkey Oll Stone. 4 10 8in, 8i.00 P 5, dis 10 \$ Silps. No. 1 P 5 25 Turkey Oll Stone. 4 10 8in, 8i.00 P 5, dis 10 \$ Silps. No. 1 P 5 25 Grindstones. Family Loring's dis 10 \$ Stove Polish. Joseph Dizon's P gross \$4, co, dis 5 \$ Gem. P gross \$4, co, dis 5 \$ Ruby. P gross \$4, co, dis 5 \$ Ribing Sun. P gross \$4, co, dis 5 \$ Rising Sun. P gross \$5,75, not cold Medal.	per, a was a component of chief value), 4; \$ and which copper is a component of chief value), 4; \$ and a which copper is a component of chief value), 4; \$ and a marican lagot. American lagot. **P 5 See Trade Report. **Brasiers' Copper, ordinary sizes, 10 oz. and over 12 oz., \$ 42, ft. **P 16 Sec. **P43, ft. **P 18 Sec. **P43, ft. **P44, ft. **P45, ft. **P45, ft. **P45, ft. **P45, ft. **P46, ft. **P4
Sand Stone	over 12 os., \$\vec{v}\$ sq. ft
Arkansas Stone, No. 1, \$ \$ 5.00 to \$ 10.5	Circles less than & in.i n diameter \$\ \mathbb{P} \ \ \mathbb{B} \ \ \mathbb{3ic} \ \mathbb{Circles & \mathbb{4} \ \mathbb{m} \ \mathbb{Circles & \mathbb{A} \ \mathbb{M} \ \mathbb{M} \ \mathbb{B} \ \mathbb{G} \ \mathbb{G} \ \mathbb{B} \ \mathbb{B} \ \mathbb{B} \ \mathbb{G} \ \mathbb{M} \ \mathbb{B} \ \mathbb{B} \ \mathbb{G} \ \mathbb{B} \ \mathbb{G} \ \mathbb{B} \ \mathbb{B} \ \mathbb{G} \ \mathbb{G} \ \mathbb{B} \ \mathbb{B} \ \mathbb{G} \ \mathbb{B} \ \mathbb{G} \ \mathbb{B} \ \mathbb{G} \ \mathbb{B} \\mathbb{B} \mathbb{B} \mathbb{B} \\mathbb{B} \mathbb{B} \mathbb{B} \\mathbb{B} \mathbb{B} \mathbb{B} \\mathbb{B} \mathbb{B} \mathbb{B} \mathbb{B} \\mathbb{B} \mathbb{B} \mathbb{B} \mathbb{B} \\mathbb{B} \mathbb{B} \mathbb{B} \mathbb{B} \mathbb{B} \\mathbb{B} \mathbb{B} \mathbb{B} \mathbb{B} \mathbb{B} \mathbb{B} \\mathbb{B} \mathbb{B} B
Turkey Oil Stone	Locomotive Fire Box Sheets # 5 26c Sheathing Copper, over 12 oz. * sq. ft. # 5 26c Boit Copper. # 5 26c
Stove Polish. \$\pi\$ gross \$6.00, dis 5 \$ Joseph Dixon's. \$\pi\$ gross \$4.50, dis 5 \$ Gom. \$\pi\$ gross \$4.50, dis 5 \$	Copper Bottoms. ** 55 300 No Copper is Sheathing except 14x48 inches and not to exceed 34 oz. to the sq. ft.
Ruby # gross \$3.75, net Gold Medal. # gross \$6.00, dis 25 % Rising Sun. # gross \$4.75, net	IXX48, by the case.
Steeldis to \$; full cases, dis 50&10 \$) 2 \$ lrondis to \$; full cases, dis 50&10 \$) 2 \$	FOR timing both sides, double the above amount, O'NEILL'S PATENT PLANISHED COPPER. 14X48.
Try Squares and Bevels	12 oz. and lighter
Winterbottom's Try and Mitre. dis 20210 \$ Balley's Try Squares and T Bevels. dis 20210 \$	14 and 16 oz. and heavier # B 36c By the case. # B 35c (And all sizes not over 20 In. wide.)
Rising Sun. Brances. Steel. dis of 5; full cases, dis och 5 2 5 Iron. dis to 5; full cases, dis och 5 2 5 Nickel Plated. dis to 5; full cases, dis och 5 2 5 Nickel Plated. add \$2.5 G \$4.00 F doz, net 5 Try Squares and Bevels. dis 45 to 5 Star Try Squares and Bevels. dis 45 to 5 Star Try Squares and Bevels. dis 45 to 5 Star Try Squares and There is dis 45 to 5 Winterbetton up to 5 to 5 to 5 to 5 to 5 to 5 The Balley's Try Squares and There is dis 45 to 5 Double-Pointed Tacks. dis 45 5 Tap Borers. dis 405 5 Tap Borers. dis 405 5 Tap Borers.	14 and 16 oz. and heavier
Tap Borers. Common and Ring dis 202:0 5 Ives' Tap Borers.	Brown & Sharp & Gauge the Standard for Meta; Old English Gauge the Standard for Wire.
Tap Borers, Common and Ring. dis socio 5 Ivee' Tap Borers. dis tokto 6 Enterprise Mfg. Co. dis 20 % Tapes, Mensuring.	Brown & Sharp & Gauge the Standard for Meta; Old English Gauge the Standard for Wire.
Common and King dis 20210 5 Ives' Tap Borers dis 10210 5 Enterprise Mfg. Co. dis 20 5 Tapes, Measuring. American dis 25 5	Brown & Sharp's Gauge the Standard for Meta; Old English Gauge the Standard for Wire. BRASE MANUFACTURES "PILCE LINT.—dis 10 S. July 1, 1878. Cash prices for Roll and Sheet Brass. For less quan- tity than 100 hs. add 20 % h.
Common and King dis 20210 5 Ives' Tap Borers dis 10210 5 Enterprise Mfg. Co. dis 20 5 Tapes, Measuring. American dis 25 5	Brown & Sharp's Gauge the Standard for Meta; Old English Gauge the Standard for Wire. BRASE MANUFACTURES "PILCE LINT.—dis 10 S. July 1, 1878. Cash prices for Roll and Sheet Brass. For less quan- tity than 100 hs. add 20 % h.
Common and King dis 20210 5 Ives' Tap Borers dis 10210 5 Enterprise Mfg. Co. dis 20 5 Tapes, Measuring. American dis 25 5	Brass. Brass Standard for Meta; Old English Gauge the Standard for Wire. Brass MANUFACTURERS FIRST LIFET.—dls 15.5. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add 50 F B. All Nos. not thinner Hom Brass. not wider than 14 in an to No. 28, wider than 2 in., not wider than 14 in the No. 28, wider than 2 in., all Nos. to No. 28, inclusive, and widths over 14 to 20 in., inclusive. 30 No. 30 No. 30, inclusive, and widths over 20 in., inclusive. 30 In Nos. to No. 28, inclusive, and widths over 20 in., inclusive.
Common and King	Brown & Sharp s Gauge the Shandard for Meta; Old English Gauge the Shandard for Wire. BRASS MANUFACTURERS' PILEC LIFE.—dis 1 of 5. Cash prices for Roll and Sheet Brass. For less quantity than 100 hs. add 90 W h. BIOS BRASS. All Nos. not thinner than to No. 28, wider than 2 in., not wider than 4 in. 100 mol. 1, inclusive, and widths over 14 to 20 in., inclusive, and widths over 20 to 20 in. inclusive. All Nos. to No. 28, inclusive, and widths over 20 to 20 in. inclusive. 90 in., inclusive. 90 in.
Common and King. dis socio 5 twos Tap Borera dis 10 king. Co. dis 20 King Fap Borera dis 10 king. Co. dis 20 Kingson Mensuring. American. dis 25 Kingson dis 20 Kingson di	Braus. Brown & Sharp s Gauge the Shandard for Meta; Old English Gauge the Shandard for Wire. Braus MANUFACTURES 'PILEC LIFET.—dis 10 %. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add 90 W B. All Nos. not thinner than 10 No. 28, wider than 2 in., not wider than 4 in
Common and King. dis socio 5 twos Tap Borera dis 10 king. Co. dis 20 King Fap Borera dis 10 king. Co. dis 20 Kingson Mensuring. American. dis 25 Kingson dis 20 Kingson di	Brass. Brown & Sharp s Gauge the Standard for Meta; Old English Gauge the Standard for Wire. Brass MANUFACTURERS' PIECE LIFET.—dis 15. Cash prices for Roll and Sheet Brass. Cash prices for Roll and Sheet Brass. Life than 100 Bs. add 90 W B. Hos so to thinner than 10 No. 28, wider than 2 in., not wider than 14 in. All Nos. not thinner than 10 No. 28, wider than 2 in., not wider than 14 in. All Nos. to Chalfe. All Nos. to No. 28, inclusive, and widths over 14 to 20 In., inclusive. All Nos. to No. 28, inclusive, and widths over 20 to 20 in., inclusive. All Brass thinner than No. 28 is Pinters' Brass, at. 48c Sheets 24,48, and all sheets out to particular sizes and lengths under 20 in., in width wider than 2 in. 32c Printers' Rules. 60 Sheets wider than 90 in. and under 40 in. 400
Common and King. dis socio 5 twos Tap Borera dis 10 king. Co. dis 20 King Fap Borera dis 10 king. Co. dis 20 Kingson Mensuring. American. dis 25 Kingson dis 20 Kingson di	Braus. Brown & Sharp s Gauge the Shandard for Meta; Old English Gauge the Shandard for Wire. Braus MANUFACTURES 'PILEC LIFET.—dis 10 %. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add 90 W B. All Nos. not thinner than 10 No. 28, wider than 2 in., not wider than 4 in
Common and King. dis solt of two from the common and King. dis to the feature of the common and	Brown & Sharp s Gauge the Shandard for Meta; Old English Gauge the Shandard for Wire. Brass MANUFACTURES PIECE LIFET—dis 10 %. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add 50 \$\tilde{V}\$ B. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add 50 \$\tilde{V}\$ B. Bill Nos. not thinner Holl Brass. not wider than 14 lind Brass. all Nos. to No. 28, inclusive, and widths over 14 to 20 ln., inclusive. 20 ln., inclusive. 21 Nos. to No. 28, inclusive, and widths over 22 to 30 ln., inclusive. 26 P. \$\tilde{V}\$ advance on each No. above Nos. 28 to 38, lindicative. 21 Brass thinner than No. 38 is Plater's Brass, at. 48c Sheets 2428, and all absets out to particular sizes and lengths under 50 in., in width wider than 2 in. 32c Printer's Rules. 20 Printer's Rules. 20 Printer's Rules. 20 So. 46c Circular Sheets, in diam. from 4 th. to 14, inclusive. 34c 22 So. 40. 46c 23 So. 46c 24 De more than High Brass. 40 De more than High Brass.
Common and King. dis solt of two from the common and King. dis to the feature of the common and	Brown & Sharp s Gauge the Standard for Meta; Old English Gauge the Standard for Wire. Briss MANDVACTURES FIRE LIBT.—dis 10 %. Cash prices for Roll and Sheet Brass. For less quantity than 10 hs. add 9c % h. HIGH BRASS. All Nos. not thinner than to No. 28, wider than 2 in., not wider than 14 in. All Nos. to No. 28, inclusive, and widths over 14 to 20 in., inclusive. All Nos. to No. 28, inclusive, and widths over 20 to 20 h inclusive. All Nos. to No. 28, inclusive, and widths over 20 to 20 h inclusive. All Brass to No. 28, inclusive, and widths over 20 to 20 h inclusive. All Brass thinner than No. 25 is Pinters' Brass, at. 38° Sheets 4428, and all sheets out to particular sizes and lengths under 20 in., in width wider than 2 in. 32° Printers' Rules. On the Sheets wider than 30 in. and under 40 in. 42° 42° 42° 42° 42° 42° 42° 42° 42° 42°
Common and King. dis solto Fore Tap Borers. dis tokto Enterprise Mig. Co. dis solto Tapes. Measuring. dis 25 Appling Tapes. dis 25 Appling Tapes. dis 25 Thermometers. dis 25 to 5 Thermometers. dis 25 to 5 Thermometers. dis 50 to 5 Thermometers. dis 50 to 5 To barce Cutters. dis 50 to 5 All Iron. # dos \$10.50, dis 20 to 5 All Iron. # dos \$10.50, dis 20 to 5 To Calks. Winsted. # b 100. dis 10 to 5 To Calks. Winsted. # b 100. dis 45 Trapes To 5 and Machines. dis 50 to 5 Trapes To 5 and Machines. dis 5 Trapes To 5 and Machines. dis 5 Elake's Patent dis 5 Mouse. Wood. Choker. dis 5 Patent Choker (Union Patent Choker (Union Patent Choker (Union Round Wire. # dos \$1.50, dis 10 to 5 Patent Choker (Union Round Wire. # dos \$1.50, dis 10 to 5 Patent Self Setting. # dos holes, 2c, net cape Cape Patent Self Setting # dos holes, 2c, net cape Cape Patent Self Setting # dos holes, 2c, net cape Trowels. Lothrops Birks and Plastering. dis 10 to 5 Reed's Brick and Plastering. dis 10 to 5 Reed's Brick and Plastering. dis 10 to 5 Reed's Brick and Plastering. dis 15 Reed's Brick and Plastering.	Brown & Sharp s Gauge the Standard for Meta; Old English Gauge the Standard for Wire. Briss Manufacturency Pinter Lifet.—dis 15. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add gc # B. HIGH BRASS. All Nos. not thinner than to No. 28, wider than 2 in., not wider than 14 in. All Nos to No. 28, inclusive, and widths over 14 to 20 in., inclusive. 30c All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 31 Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 31 Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 31 Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 31 Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 32 Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 32 Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 33c Nos than 1 Nos 10 in. and over 4 in. 20 in. 2
Common and King	Brown & Sharp s Gauge the Standard for Meta; Old English Gauge the Standard for Wire. Briss Manufacture By Pinter Lifst.—dis 18. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add gc \(\text{P} \) . HIGH BRASS. All Nos not thinner than to No. 28, wider than 2 in., not wider than 14 in. All Nos to No. 28, inclusive, and widths over 14 to 20 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C 31
Common and Ring. dis socio Sense Pare Pare Pare Pare Pare Pare Pare Par	Brass. Brown & Sharp s Gauge the Standard for Meta; Old English Gauge the Standard for Wire. Brass Manufacturers' Pilet. Lifst.—dis 16. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add 50° Bs. HIGH BRASS. All Nos. not thinner than to No. 28, wider than 2 in., not wider than 14 in. 100 All Nos to No. 28, inclusive, and widths over 14 to 20 in., inclusive. 201 All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 202 All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 203 In., inclusive. 204 All Brass thinner than No. 28 is Platers' Brass, at. 48c Sheets 24x,8, and all sheets out to particular sizes and lengths under 20 in., in width wider than 2 in. 32c Printers' Rules. 204 Pinters' Rules. 205 Printers' Rules. 206 Circular Sheets, in diam. from 4 in. 0 44, in. 10 44
Common and King. dis solts for Serves Tap Borers. dis 162.05 Enterprise Mig. Co. dis 205 Spring Tapes. dis 252.05 Enterprise Mig. Co. (Champion) dis 205 Enterprise Mig. Co. (Champ	Brown & Sharp s Gauge the Standard for Meta; Old English Gauge the Standard for Wire. Brass MANUFACTUREN' PILEC LIST.—dis 16. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add gc # B. HIGH BRASS. All Nos not thinner than to No. 28, wider than 2 in., not wider than 14 in. All Nos to No. 28, inclusive, and widths over 14 to 20 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Rrass thinner than No. 38 is Platers' Brass, at. 48c Sheets agags, and all sheets out to particular sizes Sheets agags, and all sheets out to particular sizes. Sheets wider than 50 in. and under 40 in
Common and King	Brown & Sharp s Gauge the Standard for Meta; Old English Gauge the Standard for Wire. Bries Manufacturers Piece Lifet.—dis 10 %. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add gc \(\text{P} \). HIGH BRASS. All Nos not thinner than to No. 28, wider than 2 in., not wider than 4 in. All Nos to No. 28, inclusive, and widths over 14 to 20 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C 30C 30C 30C 30C 30C 30C 30
Common and King	Brown & Sharp s Gauge the Standard for Meta; Old English Gauge the Standard for Wire. Bries Manufacturers Piece Lifet.—dis 10 %. Cash prices for Roll and Sheet Brass. For less quantity than 100 Bs. add gc \(\text{P} \). HIGH BRASS. All Nos not thinner than to No. 28, wider than 2 in., not wider than 4 in. All Nos to No. 28, inclusive, and widths over 14 to 20 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C All Nos to No. 28, inclusive, and widths over 20 to 30 in., inclusive. 30C 30C 30C 30C 30C 30C 30C 30
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MMM	No.22
%	No.23
18	No.25
	NO.27
20.00	NO.30
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8 3/4 3	No. 32
N N N	Spring Wire 2c P B advance.
4343	No 4
N 38 80	wae,
N 24 %	Brass Rods, No. 8 and larger not less than 2 feet lengths, 3gc.
%	wire straightened and cut, smaller than No. 8, and not less than 2 feet lengths, 38c.
6C	Brass Rods, No. 8 and larger not less than 2 fee tengths, 3gc. Wire straightened and cut, smaller than No. 8, ann not less than 2 feet lengths, 3gc. Wire and Rods less than 2 feet lengths, special rates Twelve cents per B extra for spooling on 1 B spools BISCELLANEOUS. CORREON Plain Brass Pall Ears.
00 60	
oe ld	Brass Door Rail
6C	High Brass Scrap
ot %	Gilding. 19 Turnings, Filings and Chips half the price of Scrap. Terms—Not cash. Interest to be added after thirt;
et	unys.
100	Plain to No. 20 inclusive, above 1/4 in. to 3 in
8	" above 3 in
7	Number. Nos. 24, 25, 26, four cents advance on List for each
3	Number. Nos. 24, 25, 26, four cents advance on List for each Number. Above No. 25, special rates. Piain, 14 inch
200	Piain, ¼ inch
9,9	All Mandrel Drawn Tubes, 5 cents advance on List
1%	Prices. Fancy Tubing to No. 20
18	English, Scotch and Extra Patterns Fancy Tubing to No. 20
.00	vance on Last.
00	Add to 2 cents 1/4 cent for each additional cutting under 2 feet.
00	All Mandrel Drawn Tubes under % in., 25 cents per pound advance. ZINC TUBING.—net.
00	Plain ZINC TUBING.—net. Fancy 2
00	Scotch and Extra Patterns
00	4 Per cent. GERMAN SILVER TUBING, -dis 10 %
00	9 40
00	12 "
00	16 ·
	STEEL. DUTY: Bars, Ingots. Sheets and Cottle
8	valued at 7 cents P B., or under, 244 cents; over, cents, and not above 11, 3 cents P B: over 11, 36 cents
K	₩ B, and to % ad val. Railway Bars, 1½ cents ₩ b Railway Bars, in part Steel, 1 cent ₩ b. Provided
	STEELDUTY: Bars, Ingots, Sheets and Colls valued at 7 cents & B., or under, 24% cents; over, cents, and not above 11, 3 cents & B. over 11, 3% cents. Railway Bars, in part Steel, 1 cent & B. Provided that Metal cemented, cast or made from Iron by the Bessemer or pneumatic process, of whatever form of description, shall be classed as American Unst Steel.
	description, shall be classed as American Cast Steel.
	Spring
nd ne	Boiler Plate
35	Machinery (round and square)9
n.	description, shall be classed as American Unst Steel. Spring. 15 Spring. 15 Spring. 17 Spring. 18 Spring
oc.	saw Plate, mill and mulay
00	Chrome Steel.
	Chrome Steel
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.00	English Steet.—Payable in gold, net.
00	Extra Cast. # B 1536
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te.	ad quality. # 10 110
	Sheet Cast Steel, 1st quality. # 5 15160
oc 20	Machinery
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Red Lend, American	Brown, Spanish	, Am'n English dark, lingh dark, lingh dark, soiceted Lumpowdered ders, soft, English time lish Energy wingle Thick—dessecurrent peingle Thick—dessecurent peingle peingl	. a.m. t	Ass.	100460 1 100	## 1 150 ##
Red Lend, American State	Red Land, American	FRENCH WIND fices current pe ingle Thick.—c EES. 15	r box o	ABB. f 50 fee it 60dts	t.	100 414 200 200 200 200 200 200 21 200 21 200 21 200 21 200 200 200
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Red Lend, American State	Red Lond, American 1/2 1	FRENCH WIND fices current pe ingle Thick.—c EES. 15	r box o	ABB. f 50 fee it 60dts	t.	96 96 96 96 97 96 97 96 96 98 98
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Red Lend, American State	Red Lond, American 1/2 1	FRENCH WIND fices current pe ingle Thick.—c EES. 15	r box o	ABB. f 50 fee it 60dts	t.	C golo
Red Lend, American State	Red Lond, American 1/2 1	FRENCH WIND fices current pe ingle Thick.—c EES. 15	r box o	ABB. f 50 fee it 60dts	t.	@ 15-60 4 @ 06 25-60
Red Lend, American State	Red Lond, American 1/2 1	FRENCH WIND fices current pe ingle Thick.—c EES. 15	r box o	ABB. f 50 fee it 60dts	t.	2960 2560
Red Lend, American State	The bulk Store S	FRENCH WIND fices current pe ingle Thick.—c EES. 15	r box o	ABB. f 50 fee it 60dts	t.	
Rose Pink	Rose Pink 10 @ 130	FRENCH WIND fices current pe ingle Thick.—c EES. 15	r box o	ABB. f 50 fee it 60dts	t.	
Rose Pink	Rose Pink 10 @ 130	FRENCH WIND fices current pe ingle Thick.—c EES. 15	r box o	ABB. f 50 fee it 60dts	t.	6
Rose Pink	Rose Pink 106 130 130	FRENCH WIND fices current pe ingle Thick.—c EES. 15	r box o	ABB. f 50 fee it 60dts	t.	
Rose Pink	Rose Pink 10 @ 130 130	FRENCH WIND fices current pe ingle Thick.—c EES. 15	r box o	ABB. f 50 fee it 60dts	t.	
White, Paris, English prime in bbla 2 @ 2 dc Vellow Ochre, French in bbla 2 @ 2 dc Vellow Ochre, French in casks 1 cc vest in oil asset d cans, irc vest kegs, bc x 60 c x 6	White, Paris, English, prime in bbls. 2@ 256 Yellow Ochre, French in oilasst'd cans, ire; kegs, 8c Do	ingle Thick.—c	ist.	it books	%	
White, Paris, English prime in bbla 2 @ 2 dc Vellow Ochre, French in bbla 2 @ 2 dc Vellow Ochre, French in casks 1 cc vest in oil asset d cans, irc vest kegs, bc x 60 c x 6	White, Paris, English, prime in bbls. 2@ 256 Yellow Ochre, French in oilasst'd cans, ire; kegs, 8c Do	EES. 1524	18t. 8 7.50			
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White, Paris, English prime in bbla 2 @ 2 dc Vellow Ochre, French in bbla 2 @ 2 dc Vellow Ochre, French in casks 1 cc vest in oil asset d cans, irc vest kegs, bc x 60 c x 6	White, Paris, English, prime in bbls. 2@ 256 Yellow Ochre, French in oilasst'd cans, ire; kegs, 8c Do	30	8.50	£ 6.76	8 6.25	8 5.71
White, Paris, English prime in bbla 2 @ 2 dc Vellow Ochre, French in bbla 2 @ 2 dc Vellow Ochre, French in casks 1 cc vest in oil asset d cans, irc vest kegs, bc x 60 c x 6	White, Paris, English, prime in bbla 2 @ 256 Yellow Ochre, French 51.75 in oilasst'd cans, ric; kegs, 8c Do	30 30 36		7-75	7.25	6.50
White, Paris, English prime in bbla 2 @ 2 dc Vellow Ochre, French in bbla 2 @ 2 dc Vellow Ochre, French in casks 1 cc vest in oil asset d cans, irc vest kegs, bc x 60 c x 6	White, Paris, English, prime in bbls. 2 @ 2565 34 x 56 to 40 x 56 Yellow Ochre, French in oil asset'd cans, ric; kegs, 8c Do	36	10.75			4.41
White, Paris, English prime in bbla 2 @ 2 dc Vellow Ochre, French in bbla 2 @ 2 dc Vellow Ochre, French in casks 1 cc vest in oil asset d cans, irc vest kegs, bc x 60 c x 6	White, Paris, English, prime in bbla 2 @ 2565 Yellow Ochre, French 51.75 'in oil asset'd cans, ric; kegs, 8c Do	44	13.00	11.50	9-75	
White, Paris, English prime in bbla 2 @ 2 dc Vellow Ochre, French in bbla 2 @ 2 dc Vellow Ochre, French in casks 1 cc vest in oil asset d cans, irc vest kegs, bc x 60 c x 6	White, Paris, English, prime in bbla 2 @ 2565 Yellow Ochre, French 51.75 'in oil asset'd cans, ric; kegs, 8c Do	50,	14.90	13.25		
White, Paris, English prime in bbla 2 @ 2 dc Vellow Ochre, French in bbla 2 @ 2 dc Vellow Ochre, French in casks 1 cc vest in oil asset d cans, irc vest kegs, bc x 60 c x 6	White, Paris, English, prime in bbla 2 @ 2565 Yellow Ochre, French 51.75 'in oil asset'd cans, ric; kegs, 8c Do	54	16,63		12.00	
The content	in oilasst'd cans, ne; kegs, sc Do	60	18.25	17.25	15.00	
The White, American No. 1, dry.	" Vermontin casks 11/6c age	60	20.75			-
The White, American No. 1, dry.					-	dh
Olise 20 x 30 to 20 x 44 32,45 17,45 Linseed, Raw, in casks and bbis. Φ gal. 57c @ 55c Bolled " " " " " " " " " " " " " " " " " "	Yellow Chrome					
Olise 20 x 30 to 20 x 44 32,45 17,45 Linseed, Raw, in casks and bbis. Φ gal. 57c @ 55c Bolled " " " " " " " " " " " " " " " " " "	Zinc White, American No. 1, dry	15,	\$12.00	\$11.00		8 0.3
Olise 20 x 30 to 20 x 44 32,45 17,45 Linseed, Raw, in casks and bbis. Φ gal. 57c @ 55c Bolled " " " " " " " " " " " " " " " " " "	No. 1, in oil	30	17.25	15.75	14.00	2013
Olise 20 x 30 to 20 x 44 32,45 17,45 Linseed, Raw, in casks and bbis. Φ gal. 57c @ 55c Bolled " " " " " " " " " " " " " " " " " "	in oil	36	19.75	17.25	14,50	
"Unbleached bbi, 570 6 000 "Unbleached bbi, 570 6 000 Sizes above 40 x 60—\$10.00 per box extra for ever the send of the implies	26 x 36 to 26 x 44	44	23,25	21.25	17.25	
"Unbleached bbi, 570 @ 000 Unbleached bbi, 570 @ 500 Sizes above 40 x 60—\$10.00 per box extra for ever	Linguage Raw in cacks and bhis wal see 2 con 10 X 52 to 30 X 50	54	24.00	23,25	19.35	
"Unbleached bbi, 570 @ 000 Unbleached bbi, 570 @ 500 Sizes above 40 x 60—\$10.00 per box extra for ever	Bolled. " 620 @ 640 30 x 56 to 34 x 50	£	27.75	25.00	21.75	
"Unbleached. bbl, 43c @ 59c Cotton Seed, Crude. bbl, 50c @ 50c We inches. "Southern Yellow bbl, 50c White. bbl, 50c White. bbl, 50c Glass more than 40 Inches wide. All sizes above 40 x 50—\$10.00 per box extra for ever two inches. The second state of the second state	Whale, Crude	60,	33.25	30.00	37.75	
Corton Sond, Crude. Dbl, soc Sure inches. "Southern Yellow Dbl, 55c An additional to per cent. will be charged for a bloom with the control of the surface of of	"Unbleachedbbi, 53c @ 55c Sizes above	40 X 60-\$10.00	per b	OK OK		SYSIT
White bbl, oc Glass more than 40 inches wide. All sizes above to Neatsfoot, Winter 700 @ \$1.10 inches in length, and not making more than \$1 unite.	Cotton Seed, Crude	nal to per cent.	will	be cha	urged f	or all
Meanstoot, Winter	Whitebbl, 600 Glass more tha	nan 40 inches	wide.	All si	ses ab	OVE S
Natural Lubricating	Natural Lubricating		rking n	ited in	ohea h	TATERO

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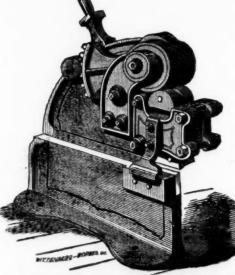


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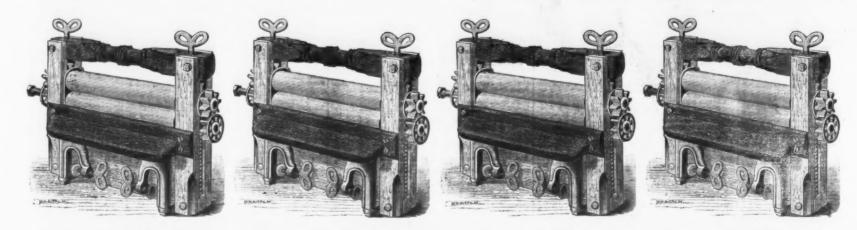
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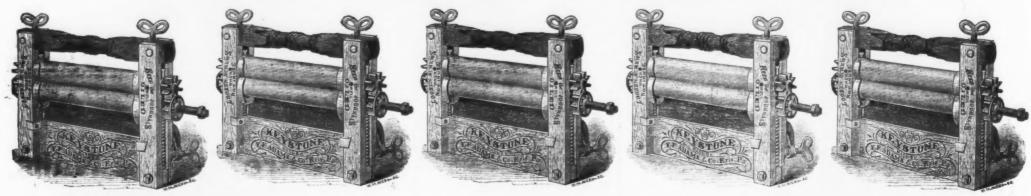
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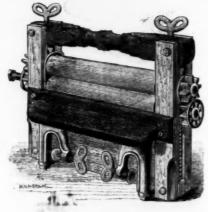
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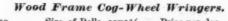
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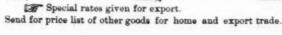




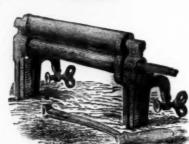
		Wood	Fre	ame	Friction	Wri	ngers.	
No.	18.		6.6	6.6	11x17%.	6.6	4.6	71.00
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No.	12.		4.6	4.6	10x17/4.	6.6	- 66	63.00
No.			ze of	Rolls,	IOXIX.	Price	per doz.,	\$60.00

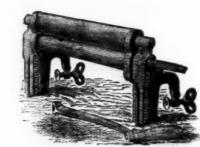
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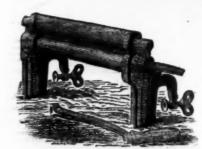
									02.00
Self-	Adjus	ting	I	ron .	Frame	Frictio	n I	Vrin	gers.
No. 2		Size	of	Rolls	10x1%.	Price	per	doz.,	\$51.00
No. 2.		6.6		44	IOXIX.	44	61		54.00
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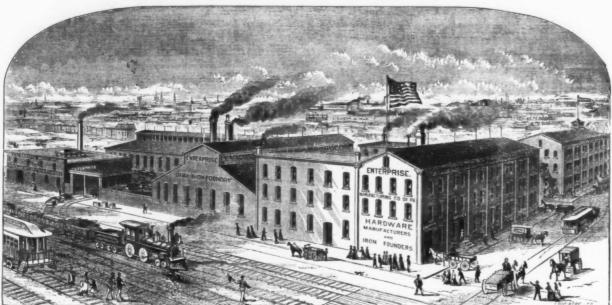
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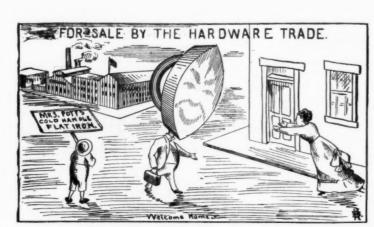
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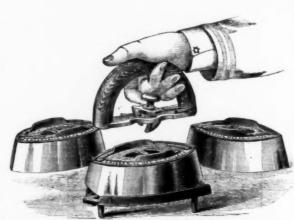
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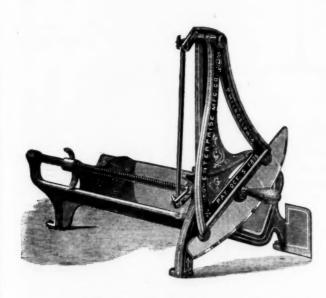








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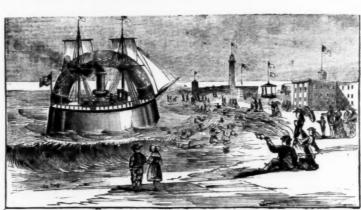
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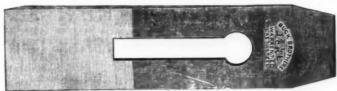
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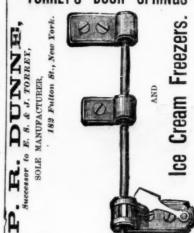
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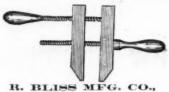
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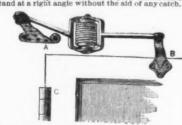
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Which cannot be forced back into the handle.

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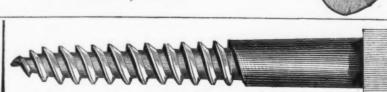
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Pad Locks, Railroad Switches, Freight Cars, and the Hardware Trade. All sizes, with Brass and Steel Keys, with & without chains. Passenger Car Locks, Bronzed, Nickel-Plated and Japanned.

Patent Tubular Night Latches. BROOKLYN, N. Y.

August 15, 1878.	
PHILADELPHIA.	Plate:
(Corrected weekly by Lloyd, Supplee & Walton). Terms, 30 days. For 60 or 90 days, Interest added at 10 per cent. per annum.	German Silver
Anvile. Peter Wright's, * B.gold	dis 15 de dis
Reading No. 72. per doz \$ 5 00 net 74 6 00 net 75. 75 70 net	Stove Polish.—Gem # gross, \$4'50, di
Reading No. 72. per doz \$ 5 00 pet	Tacks. Brads, &cNew Listdis 5 d
A xes.	4-8 and larger, 9c; 3%-8, 8%-c P B New list, Double Pointed Tacks dis 40 Traps. Genuine Oneida—Newhouse. dis
Crown Prince	Genuine Oneida—Newhouse
Crown Prince 950 @ 10 50 net Augers and Auger Bits.— Bares' Nut Augers dis 40-810 @ 50 @ Cook's Augers dis 15 5 Benjamm Pierce Auger Bits dis 40-810 @ 50 @ Cook's "dis 15 5 Griswold Auger Bits dis 40-80 0 60-85 5 Jennings" dis 10-80 0 60-85 5 Jennings' dis 10-80 0 60-85 5 Jennings' dis 10-80 0 60-85 5 Jennings' dis 20-80 0 60-85 8 Honney's Pat. Hol. Augers, list \$48 @ doz. dis 25-8-10 g Balances.— Balances.— Balances.— Balances.— 9 50 @ 10 50 net 9 50 @ 10 n	Agricultural— ## doz 10 in., \$3 60; 12 in., \$5 40 net; case di Coes' Genume
### Ronney S Tat. Hol. Augers, its ### ### ### ### ### ### ### ### ### #	Wire.— Bright or Ann'd, No. 0 to 18
All other Spring Balances	Coppered v to 18.
Conneil's Door Belts	Wire.
## 1. 12:00 ## 1:00 ##	PITTSBURGH. Merchant Iron.
## Horing Wachines.— Upright, with Augers	# Hat Bar. 1½ to 4x% to 1 in1.8cc 1½ and 1½x% to ¾ in 1½ to 6x% to 1 in1.9cc 1 and 1½x% to ¾ in 1½ to 6x1½ to 1½ in2.2cc 3%, ¾ and ½x% to % in
Philadelphiadis 60&10 @ 60&20 \$ Stanley, Wrought Shutter	1
Stanley, Wrought Shutter. dis 50 g Braces. dis 40 k5 g Rackus. dis 50 g 50 k10 g Sponrard. dis 50 g 50 k10 g American Ball. dis 25 k10 g 50 g Butts. Cast Lose Joint. Narrow. dis 85 k10 g Cast Lose Joint. Narrow. dis 50 k10 g	Rounds and Squares. %, 7g, and 3g, 8g in. 1 to 1% in. 1.80c 2 to 2% in. 2 e % in. 2.30c 3% to 3% in. 2.30c 3% to 4 in. 2.30c 3% to 5% in. 1.90c 3-16 in. 3-16 in.
Cast Loose Joint, Narrow	Horse Shoe Bar—ali sizes. Heavy Bands. 3½ to 6x¼ and 5-16 in. 2e 3½ to 5x¼ and 5-16 1½ to 3¼x¼ & 5-16 in. 2e 3½ & 5x¼ and 5-16
Cast Loose Joint, Narrow dis 50±10 x dis 70±10 x dis 60±10 x dis 60±10 x dis 60±10 x dis 70±10 x dis 60±10 x d	1% to 34x34 & 5-16 in. 2c 96 & 36x34 and 5-16 Light Bands. 3 to 6x36 to 3-16 in
Narrow, Fast	Same sizes X No. 11 and No. 12 2-10c, extra. Hoop Iron. 56 & 9-16, Nos. 13 to 164-50c 7 & 11-16, Nos. 17 to 20
Parker dis 60 @ 60&10 % Clark dis 60 % Shepard dis 60 % In it & Porter dis 66 % % 10 %	Hoop From: 3 to 10. 14 and No. 12 3-10c, extra. Hoop From: 3 to 10. 4-50 % 48-916, Nos. 17 to 20 \$4 & 9-16, Nos. 13 to 16. 4-50 % 48-11-16, Nos. 17 to 20 \$4 & 11-16, Nos. 13 to 16. 3-50c 1 and 126, Nos. 16 to 15. \$4 & 136, Nos. 13 to 16. 3-50c 1 and 126, Nos. 16 to 18. \$4 & 136, Nos. 13 to 15. 3-10c 1 34 to 2, Nos. 16 to 18. \$1 & 106, Nos. 13 to 15. 2-70c 1 34 to 346, Nos. 13 to 18. \$1 & 106, Nos. 13 to 15. 2-70c 1 34 to 346, Nos. 13 to 18. \$1 & 106, Nos. 13 to 15. 2-70c 1 34 to 346, Nos. 13 to 18. \$1 & 106, Nos. 13 to 15. 2-70c 1 34 to 346, Nos. 13 to 18.
Huffer's dis 33% @ 33% & 10 g Castub.—German Haiter and Coll dis 30% 5 g gold Galvanized Pump. Findlesh # B 10% c net	1-100 P B extra for each gauge lighter.
Hind Butts All 60	Oval Iron. 24 to 1½ in. 2.20c ½ in. 55 to 34 in. 2.40c ¾ in. Half Oval & Half Record ½ in.
#.16	Half Oval & Half Round \(\frac{1}{2} \) in 2.500 \(\frac{5}{2} \) in 2.500 \(\frac{5}{2} \) in 300 \(\text{W'g'n Box Iron, } \frac{3}{2} \) Sheet Iron. \(\text{Com'n. Ch} \)
Piate	Sheet Iron. Com'n. Chare'l No. 10 to 14,.2.50c No. 15 to 17,.2.50c No. 15 to 17,.2.50c All Sheets, No. 18 and lighter, over 30 in. wide, less than 2-roc, extra.
Onfee Mills.—Box and Side	All Sheets, No. 18 and lighter, over 30 in. wide, less than 2-10c. extra. Wood's Patent Planished Sheet.
Brawing R BIVES. dis 65, 5&10s Adjustable Handie dis 20 g Fry Pans.	Wood's Patent Planished Sheet. Ist quality (A)
Fry Pans. dis 5042 10 @ 60 q Tinned. w dox.4550 4 00 4 50 5 00 5 50 6 50 7 50 9 00 10 10 0 No. 0 1 2 5 4 5 6 7 50 9 00 10 10 0 Surnished. dis 5041 @ 60 q 4 dox.4850 3 75 4 25 4 75 5 25 60 00 7 00 9 00 No. 0 1 2 3 4 5 6 7 8 9 0 9 0	Nos. 14 to 20 Galvanized Fron-Juniata. Nos. 21 to 24 132 No. 27 Nos. 25 and 26. 142 No. 29 Nos. 25 and 26. 142 No. 29 Common and imperfect Juniata, 45 to 50 % off.
# doz#8:00 3:75 4:25 4:75 5:25 8:00 7:00 8:00 9:00 No 0 1 2 3 4 5 6 7 8	Count, 30 to 49 %. Roofing Iron, Corrugated or Crimped. Galvanized Common. No. 20
State	No. 21 to 24.756&8c, "Nos. 21 to 24
Tuting Health H	Carnegie Bros. & Co.'s list. Beams and Channels. Solid Wrought from Beams, 3 to 10\(\) in \(\) 10 \(\) 1
Crown—1½ in. roll. Each 4 00 dis 45 g —6 in. roll. 7 25	Deck Beams, 7 to 9 in. by 30 ft
Geneva Flux Fluter & Sad-Iron. \$\psi\$ doz \$20 dia 2\psi\$ dia 2\psi	r in wr in to r in we in
Hammond Son	## Angle Iron. Equal Sided, 1x1 to 13 x13 in. # b "2x2 to 4x4. Unequal Sided, 2x13 to 5x4. Square Root Angles, 2x2 to 34x34. Star Iron, 13 x14 to 4x4. Sash Iron, 13 x15 x3. Miscellaneous Shapes, various shapes. # B, 2.6 to
Hunt	Sash Iron, 154x74x3-16. "3 Miscellaneous Shapes. various shapes # B, 2.6 to Nails. Fence and Brads.
Hunt	8d and 9d
Discount on Ausable and Clinton, 20 %; Glope, net.	34 in. 6.50 134 "
Locks and Knobs. Branfordnew list, dis 69&10&2 % cash Gaylord Cabinet	% in Lining. 7,001 % in Tobacco Hhd. 8d rol
State 4840 850 650 750 850 10:00 10:00	rd 3.00 6d and 7d
# dos	4d. 3.50 ad. Finishing. 1½ to 1½ in. 1 in. 7.50 2 in.
Square Candle and Oll	136 0.50 256 and over
Mattacks	5d. Slating. 4d. 3,50 ad. 4d. 3,50 ad. 1 in. 7,50 a in. 2 in. 1 in. 1 in. 2 in. 1 in. 1 in. 2 in. 1 in. 1 in. 3 in. 1 in. 1 in. 4 in. 1 in. 1 in. 2 in. 1 in. 1 in. 3 in. 1 in. 1 in. 4 in. 1 in. 4 in. 1 in. 4 in. 1 in.
Lincom's dis 62%&10 % Landers, Frary & Clark's Peti vieum, dis 20&10 % Brass Liquor Cocks dis 50 %	Boat Spikes—All sizes. Each half keg to cents extra. TERMS.—Note or acceptance at fodays: or a disco
Long and Short Cutter. \$\frac{1}{2}\$ doz. \$\frac{1}{2}\$ 0 \text{ 0} \text{ net} \text{ Pennsylvania Pettern.} \$\text{ 9} \text{ 50} \text{ 0} \text{ 10} \text{ 10} \text{ 10} \text{ net} \text{ 10}	Doot Spikes—All sizes. Each half keg to cents extra. TERMS.—Note or acceptance at 50 days; or a discord of a per cent. for cash, if remitted within to days fredate of invoice. An abatement of to cents per lallowed upon orders of 200 kegs or over.
American	# to 2 in
Planes.—Saadusky .1s 35 % Ogontz. .dis 50&10 % Bali*y .dis 25&10 % Plane Irons,—Sandusky .dis 10&10 %	% and 3% to 4 in. [15-32 in. Single and Double Shear Natilers—Same as Tool. Knife, Tup, Die, Mill Pick, Drill—Ordinary sizes Machinery Steel—Round.
Butcher's	% to 2 in
Picks Philadelphia	1 to 4x½ to ½ in 6½c 3/4 to 3/4x-32 to 3-16 in 7 Agricultural Steels. Solid Cast Steel Plow A to 16 by 3-16 to 3/4 in
Stanley Ivory	Solid Cast Steel Plow, 4 to 16 by 3-16 to 36 in. 8 Solid Cast Steel Plow, 4 to 16 by 3-16 to 36 in. 7 "Iron Center Plow," 4 to 16 by 3-16 to 36 in. 7 "Iron Back Plow," 4 to 16x3-16 to 36 in. 7 "Iron Back Plow," 4 to 16x3-16 to 36 in. 7 Soft Steel Center Plow, 4 to 16x3-16 to 36 in. 8 Soft Steel Center Plow, 4 to 16x3-16 to 36 in. 8 Clrcular Plow Coulters, 5-32 to 36 in. thick. 1 Reaper and Scythe. 11
American Pattern	Circular Plow Coulters, 5-32 to 34 in. thick
English Pattern	Finger Bar. Cutter Bars, C. S. German Spring Steel.
Steel and Irondis %%; full case, dis 50&10 % Try Squares, Stanley dis 45&10 % Disston's Try Squaresdis 45 % Boythes.—Golden Clipper, Damascus Blade, Boxeu	Reaper and Scythe Fork and Hoe Horse Rate Teeth, to length Fork and Hoe Horse Rate Teeth, to length Finger Bar. Cutter Bars, C. S. German Spring Steel Cornstalk Cutter beveled to length Planters' Hoe, C. S. Hoe, C. S. German, 10 to 16 g. 8c Common C'st, 17 to 20 g. "17 to 20 g. 11c Best Cast, 10 to 16 g. Common C'st, 10 to 16 g. 9c Rolls and Castings.
and Sharpened	Common C'st, 17 to 20 g 16 lest Cast, 10 to 16 g
Cipper No. 5, Fainted Red, Boxed and Sharpened	Common C'st, to to 16 g. 9c " " 17 to 20 g Rolls and Castings. Furnace, Floor and Straightening Plates
Saws.—Disaton's tisned, reace and Kip	Sand Rolls and Plnions, large size. 2 @ 2 Pipe Mill Castings. Rolling Mill Castings.
Not stamped "Ames " dis 51 &5 t Oliver Ames & Sons, new list. dis 32 \(\) \(\) S Not stamped "Ames" dis 37 \(\) \(\) S **Ad trons. \(-4 \) to 10 ibs. \(\) \(\) \$ 2 \(\) \(\) 6 2 \(\) 6 2 \(\) 6 2 \(\)	Spur and Bevel Wheels, large 36 Pulleys up to 26 inches. 46
Shevels and Sundes Control St. net	Pipe Mill Castings Samal size Samal size Samal size Spur and Bevel Wheels, large 36 36 36 36 36 36 36 3
Silps	8 to 15 in. " 8 to 40 in. "
Axe Stone	Heavy Hardware. Bolts, Screws, Nuts, etc. Lewis, Oliver & Phillips, discount off Standard L
Server	Heavy Infraware. Bolts, Screes, Nuts, etc. Lewis, Oliver & Phillips, discount off Standard L Carriage & Tire Bolts, oxidinary orders 75, & 35 off 7 Stove Bolts. 4085, 5 off 7 Elevator Bolts 4085, 5 off 7 Elevator Bolts 6085, 6085 off 7 Bolt Budd Lag Screws. 60850 5 off 7 Bolt Budd Lag Screws.
" AFOR	Bolt Ends

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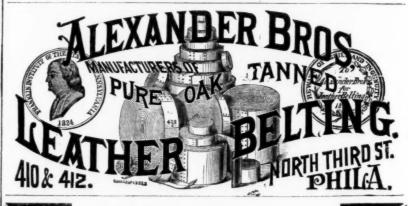
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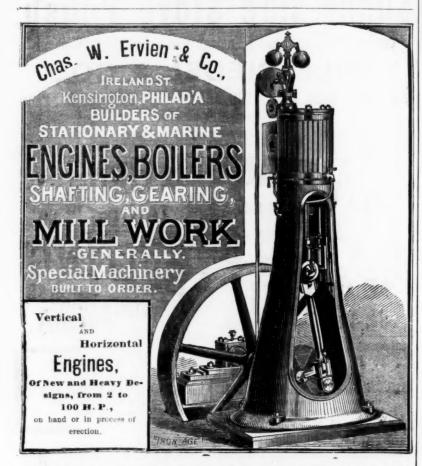
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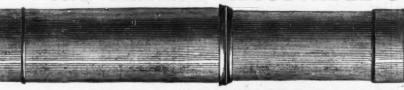
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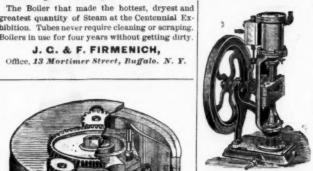
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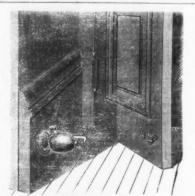


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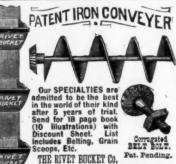
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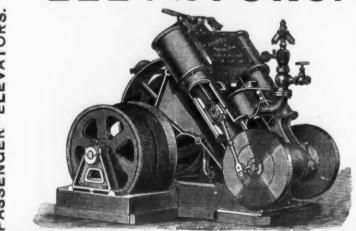
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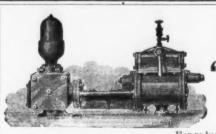
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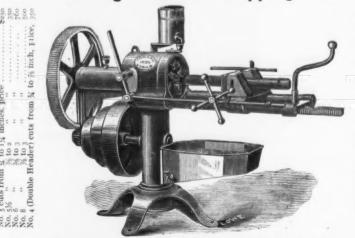
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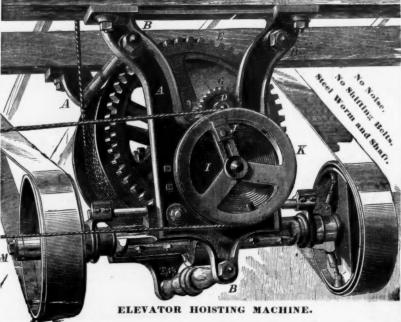
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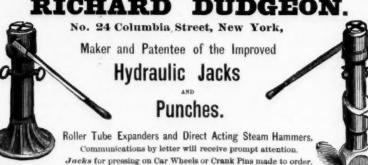
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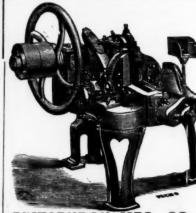


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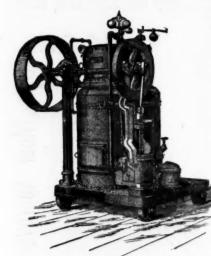


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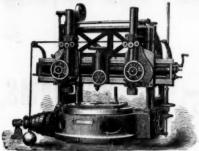
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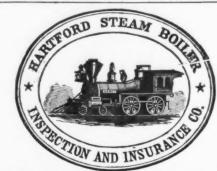
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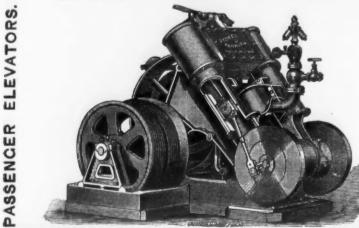
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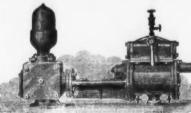
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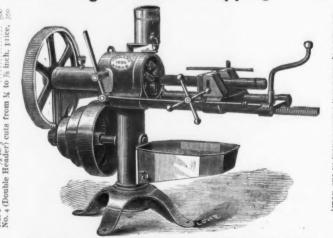
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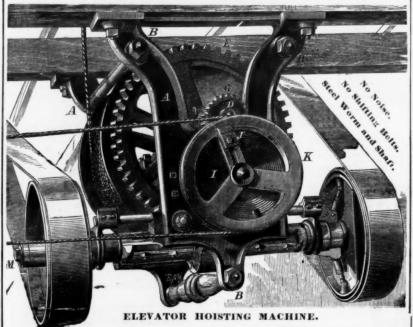
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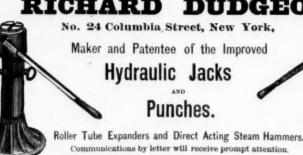


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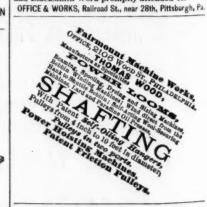


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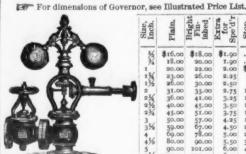
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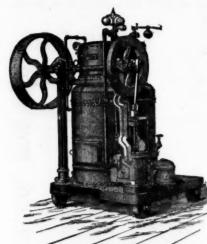


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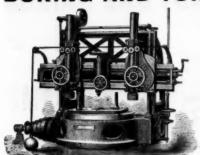
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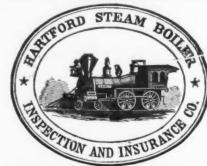
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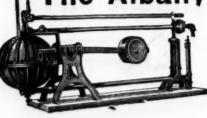
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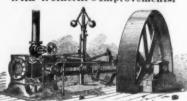


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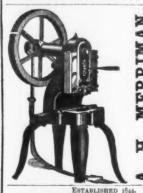
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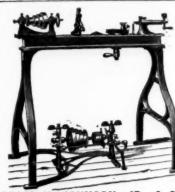
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See cut of Elevator Hoisting Machine in issue of Aug.
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The Emperor Dom Pedro, accompanied by Director General Goshorn, Superintendent Albert, and others, visited Machinery Hall, at the Centennial on the evening of June 28th. Among other things inspected, at the invitation of E. M. BOYNTON, of New York, they witnessed a trial of the New Lightning Saw, patented March 26, 1876. Two men, with one of these saws, cut off a sound log of gum-wood, one foot extreme diameter, in seven seconds, or at the rate of a cord of wood in five minutes. Messrs. Corliss, Morell, Lynch, and other members of the commission, witnessed the triale and timed the cutting. The Emperor remarked, That was fast, very fast cutting. Last evening the Emperor made another examination of the saw.—Philadelphia Press, June 30.

"BOYNTON'S SAWS were effectually tested before the judges at the Philadelphia Fair, July 6th and 7th. An ash log, eleven inches in diameter, was sawed off, with a four-and-a-half-foot lightning cross-cut, by two men, in precisely six seconds as timed by the chairman of the Centennial Judges of Class Fifteen. The speed is unprecedented, and would cut a cord of wood in four minutes. The representatives of Russia, Austria, France, Italy, Spain, Belgium, Sweden, England, and several other countries, were present, and expressed their high appreciation."

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